Data Evaluation Report on the Acute Toxicity of Dicamba (BAPMA salt) to Terrestrial Vascular Plants: Vegetative Vigor

PMRA Submission Number {.....} **EPA MRID Number 48718015**

Data Requirement:

PMRA Data Code:	9.8.4 (TGAI) or 9.8.6 (EP)
EPA DP Barcode:	402518
OECD Data Point:	IIA 8.12 (TGAI) and IIIA 10.8.1.1 (EP)
EPA Guideline:	850.4150

Test material: Dicamba (BAPMA salt) **Purity:** 47.86% w/w

Common name

Chemical name: IUPAC

CAS name

CAS No. 1918-00-9

Synonyms

Primary Reviewer: Joan Gaidos **Signature:**
Senior Scientist, CDM Smith **Date:** 2/13/13

Secondary Reviewer: Teri S. Myers **Signature:**
Senior Scientist, CDM Smith **Date:** 2/28/13

Primary Reviewer: Elizabeth Donovan, Senior Scientist **Date:** 11-2-16
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Date: 2016.11.03 11:38:04 -04'00'

Reference/Submission No.: {.....}

Company Code	{.....}	[For PMRA]
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Use Site Category:	{.....}	[For PMRA]
EPA PC Code	100094	

Date Evaluation Completed: 11-3-2016

CITATION: Porch, J.R., H.O. Krueger, and K.H. Martin. 2011. BAPMA formulatione: A Toxicity Test to Determine the Effects on (Tier II) Vegetative Vigor of Ten Species of Plants. Unpublished study performed by Wildlife International, Ltd., Easton, Maryland. Study Project Number: 147-252. Study sponsored by BASF Corporation, Agricultural Products Division, Research Triangle Park, North Carolina. Study completed December 14, 2011.

DISCLAIMER: This document provides guidance for EPA and PMRA reviewers on how to complete a data evaluation record after reviewing a scientific study concerning the acute toxicity of a pesticide to terrestrial vascular plants. It is not intended to prescribe conditions to any external party for conducting this study nor to establish absolute criteria regarding the assessment of whether the study is scientifically sound and whether the study satisfies any applicable data requirements. Reviewers are expected to review and to determine for each study, on a case-by-case basis, whether it is scientifically sound and provides sufficient information to satisfy applicable data requirements. Studies that fail to meet any of the conditions may be accepted, if appropriate; similarly, studies that meet all of the conditions may be rejected, if appropriate. In sum, the reviewer is to take into account the totality of factors related to the test methodology and results in determining the acceptability of the study.

Data Evaluation Report on the Acute Toxicity of Dicamba (BAPMA salt) to Terrestrial Vascular Plants: Vegetative Vigor

PMRA Submission Number {.....} **EPA MRID Number 48718015**

EXECUTIVE SUMMARY:

The effect of **Dicamba (BAPMA salt)** on the vegetative vigor of monocot (corn, *Zea mays*; onion, *Allium cepa*; ryegrass, *Lolium perenne*; and wheat, *Triticum aestivum*) and dicot (cabbage, *Brassica oleracea*; carrot, *Daucus carota*; lettuce, *Lactuca sativa*; oilseed rape, *Brassica napus*; soybean, *Glycine max*; and tomato, *Lycopersicon esculentum*) crops was studied at nominal concentrations of 0 (negative and solvent), 0.025, 0.074, 0.22, 0.67 and 2.0 lbs ai/A (corn, onion, ryegrass and wheat); 0 (negative and solvent), 0.0027, 0.0082, 0.025, 0.074, 0.22, and 0.67 lbs ai/A (Cabbage); 0 (negative and solvent), 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A (Oilseed rape); 0 (negative and solvent), 0.00091, 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A (Carrot); 0 (negative and solvent), 0.00030, 0.00091, 0.0027, 0.0082, and 0.025 lbs ai/A (Lettuce and tomato); 0 (negative and solvent), 0.00010, 0.00030, 0.00091, 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A (Soybean).

Measured test concentrations were <0.000036 (negative and solvent control), 0.0224, 0.0661, 0.2113, 0.6241, and 1.9172 lbs ai/A (corn); <0.000036 (negative and solvent control), 0.024, 0.0721, 0.2111, 0.6474 and 1.9699 lbs ai/A (Onion, ryegrass, wheat); <0.000036 (negative and solvent control), 0.0027, 0.0082, 0.024, 0.0721, 0.2111 and 0.6474 lbs ai/A (Cabbage); <0.000036 (negative and solvent control), 0.0009, 0.0026, 0.0076, 0.0224, 0.0661 and 0.2113 lbs ai/A (Carrot); <0.000036 (negative and solvent control), 0.0003, 0.0027, 0.0082, 0.024, and 0.0721 lbs ai/A (Lettuce); <0.000036 (negative and solvent control), 0.0026, 0.0076, 0.0224, 0.0661, and 0.2113 lbs ai/A (Oilseed rape); <0.000036 (negative and solvent control), 0.0001, 0.0003, 0.0009, 0.0026, 0.0082 and 0.0245 lbs ai/A (Soybean); <0.000036 (negative and solvent control), 0.0003, 0.0009, 0.0026, 0.0076, and 0.0224 lbs ai/A (Tomato).

The growth medium used in the seedling emergence test was artificial soil (sandy loam, pH 6.2, organic matter 1.2%). On day 21 the surviving plants per pot were recorded and cut at soil level for measuring the plant height and dry weight.

Survival in the negative control ranged from 90-100%; Survival in the solvent control ranged from 80-100%. There was no inhibition in survival for corn, cabbage, and soybean. Inhibitions in survival for ryegrass and wheat were a maximum of 3%. Inhibition in survival for onion, lettuce and tomato were maximums of 87, 10 and 22%, respectively. Carrot and oilseed rape had both promotion (14 and 2%) and inhibition (6 and 2%) in survival.

Inhibitions in height were maximums of 2 and 7% for ryegrass and carrot. Inhibitions in height were maximums of 13, 56, 28, 68 and 62% for corn, onion, wheat, soybean, tomato, respectively. There was a promotion in height for cabbage of 18% and promotion (9 and 2%) and inhibition (3 and 2%) in lettuce and oilseed rape, respectively. Inhibitions in dry weight ranged from maxima of 23 to 89% in all species. Maximum inhibitions were 46, 89, 23, 65, 54, 56, 37, 33, 62 and 73% for corn, onion, ryegrass, wheat, cabbage, carrot, lettuce, oilseed rape, soybean and tomato, respectively.

The most sensitive monocot species was onion based on biomass, with NOAEC and EC_{25} values of 0.0721 and 0.0924 lb ai/A, respectively. The most sensitive dicot species was soybean based on height, with a NOAEC and EC_{25} values of 0.0001 and 0.000826 lb ai/A, respectively.

Phytotoxic effects included adventitious growth, leaf curl, chlorosis, necrosis, and stem curl. Signs of phytotoxicity appeared dose-responsive and treatment related, increasing in severity and prevalence with an increase in treatment rate.

Maximum Labeled Rate: Not reported

Results Synopsis

Monocot

EC_{50}/IC_{50}: 0.212 lbs ai/A	95% C.I.: 0.139-0.323 lb ai/A
EC_{25}/IC_{25}: 0.0924 lbs ai/A	95% C.I.: 0.0402-0.161 lb ai/A
EC_{05}/IC_{05}: 0.028 lbs ai/A	95% C.I.: NA-0.0742 lb ai/A

NOAEC: 0.0721 lbs ai/A
Slope: NA 95% C.I.: NA
Most sensitive monocot: Onion
Most sensitive parameter: Biomass

Dicot
EC_{50}/IC_{50}: 0.00552 lbs ai/A 95% C.I.: 0.00485-0.00627
EC_{25}/IC_{25}: 0.000826 lbs ai/A 95% C.I.: 0.000664-0.00102
EC_{05}/IC_{05}: 0.00000537 lbs ai/A 95% C.I.: 0.0000197-0.0001
NOAEC: 0.0001 lbs ai/A
Slope: NA 95% C.I.: NA
Most sensitive dicot: Soybean
Most sensitive parameter: Height

This toxicity study is classified as **acceptable** and satisfies the guideline requirement for a Tier II Vegetative Vigor toxicity study.

Table 1 (Tier II studies). Summary of most sensitive parameters by species (lbs ai/A).

Species	Endpoint	NOEC	EC_{05}	EC_{25}	EC_{50}
Corn	Height	0.0661	0.0586	2.31	29.6
Onion	Biomass	0.0721	0.028	0.0924	0.212
Ryegrass	Biomass	0.0721	0.00432	2.42	197
Wheat	Height	0.0721	0.14	1.44	7.29
Cabbage	Biomass	0.024	0.0134	0.12	0.553
Carrot	Biomass	0.0076	0.00388	0.0343	0.156
Lettuce	Biomass	0.0082	0.00463	0.0162	0.0388
Oilseed Rape	Biomass	0.0661	0.0146	0.125	0.554
Soybean	Height	0.0001	0.00000537	0.000826	0.00552
Tomato	Biomass	<0.0003	0.000922	0.00403	0.0113

I. MATERIALS AND METHODS

GUIDELINE FOLLOWED: The methods used in conducting this study were based on procedures specified in the U.S. EPA Series 850 – Ecological Effects Test Guidelines OPPTS Number 850.4150. Deviations from OPPTS 850.4150 were noted:

1. The cation exchange capacity and % moisture of the soil were not reported.

2. The % relative humidity ranged from 12.64 to 94.80% for all species; OPPTS guidelines suggest that relative humidity range from 70 ± 5% during light periods and 90 ± 5% % during dark periods. While the study authors did not report when the humidity readings were taken, the lower values exceed light and dark recommendations.

3. Temperatures ranged from 16.71 to 38.44°C for all species; OPPTS guidelines suggest day temperatures of 25 ± 3°C and night temperatures of 20 ± 3°C. The study authors did not differentiate between day and night temperatures; however, the highest temperatures reported are higher than either the day or night recommendations.

These deviations do not impact the acceptability of this study.

COMPLIANCE: Signed and dated GLP, Quality Assurance and Data Confidentiality statements were provided. This study was conducted in compliance with the Good Laboratory Practice Standards as published by the U.S. Environmental Protection Agency, 40 CFR Part 160 (1989); OECD Principles of GLP (ENV/MC/CHEM (98) 17); and Japan MAFF (11 NohSan, Notification No. 6283, Agricultural Production Bureau, 1999), with the following exception:

- Periodic analyses of well water and soil for potential contaminants were not performed in accordance with GLP standards, but were performed using a certified laboratory and standard U.S. EPA analytical methods.

A. MATERIALS:

1. Test Material **BAPMA (Dicamba)**

Description: Liquid

Lot No./Batch No. : 1736-90

Purity: 47.86% w/w

Stability of compound under test conditions: Analytical verification was performed by analyzing spray mixtures from the highest application rates, with recoveries of 86-120%.

(OECD recommends chemical stability in water and light)

Storage conditions of test chemicals: The test material was stored under ambient conditions.

Table 2. Physical/chemical properties of Dicamba.

Parameter	Values	Comments
Water solubility at 20EC	Not reported	
Vapor pressure	Not reported	
UV absorption	Not reported	
pKa	Not reported	
Kow	Not reported	

2. Test organism:

Monocotyledonous species: Corn (*Zea mays*, Poaceae; Jarvis Golden Prolific), Onion (*Allium cepa*,

Liliaceae; Yellow Granex Hybrid 33), Ryegrass (*Lolium perenne*, Poaceae; Gator 3 Perennial), and Wheat (*Triticum aestivum*, Poaceae; Glenn Hard Red Spring); *EPA recommends four monocots in two families, including corn.*

Dicotyledonous species: Carrot (*Daucus carota*, Apiaceae; Scarlet Nantes), Cabbage (*Brassica oleracea*, Brassicaceae; Late Flat Dutch), Lettuce (*Lactuca sativa*, Asteraceae; Summertime), Oilseed Rape (*Brassica napus*, Brassicaceae; Dwarf Essex), Soybean (*Glycine max*, Fabaceae; Maverick), and Tomato (*Lycopersicon esculentum*, Solanaceae; Rutgers); *EPA recommends six dicots in four families, including soybean and a root crop.*

OECD recommends a minimum of three species selected for testing, at least one from each of the following categories: Category 1: ryegrass, rice, oat, wheat, and sorghum; Category 2: mustard, rape, radish, turnip, and Chinese cabbage; Category 3: vetch, mung bean, red clover, fenugreek, lettuce, and cress.

Seed source: Wheat obtained from Johnny's Selected Seeds, Winslow, ME; onion obtained from Park Seed Co., Greenwood, SC; ryegrass, carrot, cabbage, and tomato obtained from The Meyer Seed Co., Baltimore, MD; lettuce obtained from Territorial Seed Co., Cottage Grove, OR; corn obtained from New Hope Seed Co., Bon Aqua, TN; Oilseed rape obtained from Seedland Inc., Wellborn, FL; and soybean obtained from Missouri Foundation Seeds, Columbia, MO.

Prior seed treatment/sterilization: Seeds were not treated with fungicides, insecticides, or repellents prior to test initiation.

Historical % germination of seed: Corn, 100%; onion, 98%; ryegrass, 90%; wheat, 94%; carrot, 80%; cabbage, 85%; lettuce, 98%; oilseed rape, 85%; soybean, 92%, and tomato, 85%.

Seed storage, if any: None reported

B. STUDY DESIGN:

1. Experimental Conditions

a. Limit test: N/A- Conducted as a Tier II test.

b. Range-finding study No range-finding studies were reported.

c. Definitive Study

Table 3: Experimental Parameters – Vegetative Vigor.

Parameters	Seedling Emergence	
	Details	Remarks *Criteria*
Duration of the test	21days	*Recommended test duration is 14-21 days.* *OECD recommends that the test be terminated no sooner than 14 days after 50 percent of the control seedlings have emerged*

Parameters	Seedling Emergence	
	Details	**Remarks** *Criteria*
Number of seeds/plants/species/ replicate	5 seeds per replicate	*Five plants per replicate are recommended*
Number of plants retained after thinning	Thinning to one prior to test initiation.	
Number of replicates Control: Adjuvant control: Treated:	6 6 6	*Four replicates per dose should be used.* *OECD recommends a minimum of four replicates per treatment*
Test concentrations Nominal:	Corn, onion, ryegrass and wheat: 0 (negative and solvent), 0.025, 0.074, 0.22, 0.67 and 2.0 lbs ai/A Cabbage: 0 (negative and solvent), 0.0027, 0.0082, 0.025, 0.074, 0.22, and 0.67 lbs ai/A Oilseed rape: 0 (negative and solvent), 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A Carrot: 0 (negative and solvent), 0.00091, 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A Lettuce and tomato: 0 (negative and solvent), 0.00030, 0.00091, 0.0027, 0.0082, and 0.025 lbs ai/A Soybean: 0 (negative and solvent), 0.00010, 0.00030, 0.00091, 0.0027, 0.0082, 0.025, 0.074, and 0.22 lbs ai/A	Only the lowest and highest test concentration was verified. *Five test concentrations should be used with a dose range of 2X or 3X progression* *OECD recommends three concentrations, preferably with application rates equivalent to 0.0 (control), 1.0, 10.0 and 100 mg substance per kg of oven-dried soil.*
Measured:	Corn: <0.000036 (negative and solvent control), 0.0224, 0.0661, 0.2113, 0.6241, and 1.9172 lbs ai/A Onion, ryegrass, wheat: <0.000036 (negative and solvent control), 0.024, 0.0721, 0.2111, 0.6474 and 1.9699 lbs ai/A	

Parameters	Seedling Emergence	
	Details	**Remarks** *Criteria*
	Cabbage: <0.000036 (negative and solvent control), 0.0027, 0.0082, 0.024, 0.0721, 0.2111 and 0.6474 lbs ai/A Carrot: <0.000036 (negative and solvent control), 0.0009, 0.0026, 0.0076, 0.0224, 0.0661 and 0.2113 lbs ai/A Lettuce: <0.000036 (negative and solvent control), 0.0003, 0.0027, 0.0082, 0.024, and 0.0721 lbs ai/A Oilseed rape: <0.000036 (negative and solvent control), 0.0026, 0.0076, 0.0224, 0.0661, and 0.2113 lbs ai/A Soybean: <0.000036 (negative and solvent control), 0.0001, 0.0003, 0.0009, 0.0026, 0.0082 and 0.0245 lbs ai/A Tomato: <0.000036 (negative and solvent control), 0.0003, 0.0009, 0.0026, 0.076, and 0.0224 lbs ai/A	
Method and interval of analytical verification LOQ: LOD:	Calibration standards were analyzed using HPLC with UV detection (235 nm) 0.200 mg ai/L (0.000036 lbs ai/A) Set at the lowest analytical standard analyzed	
Adjuvant (type, percentage, if used)	Diammonium sulfate and ammonium sulfate.	
Test container (pot) Size/Volume Material: (glass/polystyrene)	11 cm diameter; 10 cm depth Plastic	*Non-porous containers should be used.* *OECD recommends that non-porous plastic or glazed pot be used.*

Parameters	Seedling Emergence	
	Details	**Remarks** *Criteria*
Growth facility	Greenhouse	
Seedling selection	Seedlings selected based on visual evaluation of similar size and condition and randomly assigned to test groups.	
Test material application Application time including the plant growth stage Number of application Application interval Method of application	Test material was applied to seedlings (2-5 leaves at application). 1 N/A; single application Applied using an overhead tracksprayer equipped with a moveable spray nozzle suspended 41 cm above the soil surface.	
Details of soil used Geographic location Depth of soil collection Soil texture % sand % silt % clay pH: % organic carbon CEC Moisture at 1/3 atm (%)	N/A; artificial soil N/A Sandy loam 85 6 9 6.2 0.71% Not reported Not reported	Soil was a mixture of kaolinite clay, industrial quartz sand, and peat with limestone added. Organic matter: 1.2% *Soil mixes containing sandy loam, loam, or clay loam soil with no greater than 2% organic matter are preferable. Glass beads, rock wool, and 100% acid washed sand are not preferred.* *OECD prefers the soil to be sieved (0.5 cm) to remove coarse fragments. Carbon content should not exceed 1.5% (3% organic matter). Fine particles (under 20um) makeup should be between 10 and 20%. The recommended pH is between 5.0 and 7.5.*
Details of nutrient medium, if used	Not reported.	
Watering regime and schedules	Well water from greenhouse.	

Parameters	Seedling Emergence	
	Details	**Remarks** *Criteria*
Water source/type: Volume applied: Interval of application: Method of application:	Not reported. Every 1 to 4 days. The plants were bottom-watered using subirrigation trays.	*EPA prefers that bottom watering be utilized for seedling emergence studies so that the chemical is not leached out of the soil during the test.*
Any pest control method/fertilization, if used	None reported	
Test conditions Temperature: Photoperiod: Light intensity and quality: Relative humidity:	16.71-38.44°C 16L:8D Artificial lighting used to supplement natural sunlight. 12.5-28.0 PAR 12.64-94.80%	*EPA prefers that the cold vs warm loving plants be tested in two separate groups to optimize plant growth.* *OECD prefers that the temperature, humidity and light conditions be suitable for maintaining normal growth of each species for the test period.*
Reference chemical (if used) Name: Concentrations:	N/A	
Other parameters, if any	None	

2. Observations:

Table 4: Observation Parameters – Vegetative Vigor.

Parameters	Seedling Emergence	
	Details	**Remarks**
Parameters measured (e.g., number of germinated seeds, emerged seedlings, plant height, dry weight or other endpoints)	- Survival - Phytotoxicity - Dry weight - Height	
Measurement technique for each parameter	Survival and phytotoxicity were determined visually. Height was measured from the soil surface to the	

	tip of the tallest leaf and shoots dried to determine dry weight.	
Observation intervals	Phytotoxicity and height were measured weekly. Survival and dry weight were determined at study termination.	
Other observations, if any	None	
Were raw data included?	Yes	
Phytotoxicity rating system, if used	0- No effect; 10-30- Slight effect; 40-60- Moderate effect; 70-90- Severe effect; 100- Complete effect	Frans, Robert E. and Ronald E. Talbert. 1977. Design of Field Experiments and the Measurement and Analysis of Plant Responses. Pages 15-23 in B. Truelove, ed. *Research Methods in Weed Science*. Southern Weed Science Society, Auburn University, Alabama.

II. RESULTS and DISCUSSION:

A. INHIBITORY EFFECTS:

1. Vegetative Vigor:

Survival in the negative control ranged from 90-100%; Survival in the solvent control ranged from 80-100%. There was no inhibition in survival for corn, cabbage, and soybean. Inhibitions in survival for ryegrass and wheat were a maximum of 3%. Inhibition in survival for onion, lettuce and tomato were maximums of 87, 10 and 22%, respectively. Carrot and oilseed rape had both promotion (14 and 2%) and inhibition (6 and 2%) in survival.

Inhibitions in height were maximums of 2 and 7% for ryegrass and carrot. Inhibitions in height were maximums of 13, 56, 28, 68 and 62% for corn, onion, wheat, soybean, tomato, respectively. There was a promotion in height for cabbage of 18% and promotion (9 and 2%) and inhibition (3 and 2%) in lettuce and oilseed rape, respectively. Inhibitions in dry weight ranged from maximums of 23 to 89% in all species. Inhibitions were maximums of 46, 89, 23, 65, 54, 56, 37, 33, 62 and 73% for corn, onion, ryegrass, wheat, cabbage, carrot, lettuce, oilseed rape, soybean and tomato, respectively.

Based on the study authors' results, the most sensitive monocot species was onion based on dry weight, with NOAEC and EC_{25} values of 0.074 and 0.0709 lb ai/A, respectively. The most sensitive dicot species was soybean based on dry weight, with a NOAEC and EC_{25} values of 0.000111 and 0.000807 lb ai/A, respectively (the NOAEC was based on calculated ER_5 estimate). The study authors used nominal test concentrations for calculations of toxicity values.

Phytotoxic effects included adventitious growth, leaf curl, chlorosis, necrosis, and stem curl. Signs of phytotoxicity appeared dose-responsive and treatment related, increasing in severity and prevalence with an increase in treatment rate.

B. REPORTED STATISTICS:

Survival, dry weight per replicate, and height data were analyzed. The LOAEC and NOAEC values were determined using Dunnett's one-tailed t-test. All statistical determinations were made with 95% certainty. Estimates of the ECx values and their confidence limits were determined using the non-linear regression analysis of Bruce and Versteeg when reductions in endpoints among one or more treatment groups were 25% or more relative to the control means. These analyses were conducted using SAS, version 8. Nominal concentrations were used for all analyses.

Table 5: Reported effect of BAPMA Salt on Vegetative Vigor

Species	Results summary for biomass (lbs ai/A)									
	Weight (g)	NOEC	EC_{05}	95%CI	EC_{25}	95%CI	EC_{50}	95%CI	slope	Std err
Corn	3.43-6.59	0.22	NC	NC	0.584	NC	>2.0	NC	NC	NC
Onion	26-233	0.074	NC	NC	0.0709	NC	0.199	NC	NC	NC
Ryegrass	457-592	0.074	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Wheat	0.42-1.27	0.074	NC	NC	0.275	NC	0.934	NC	NC	NC
Cabbage	1.51-3.46	0.025	NC	NC	0.114	NC	0.560	NC	NC	NC
Carrot	25.1-27.5	0.0082	NC	NC	0.0389	NC	0.168	NC	NC	NC
Lettuce	2.48-4.09	0.0082	NC	NC	0.0164	NC	>0.025	NC	NC	NC
Oilseed Rape	3.39-5.27	0.074	NC	NC	0.124	NC	>0.22	NC	NC	NC
Soybean	1.94-5.04	0.000111	NC	NC	0.00189	NC	0.0136	NC	NC	NC
Tomato	1.49-5.5	0.000944	NC	NC	0.00427	NC	0.0122	NC	NC	NC

Table 5a: Reported effect of BAPMA Salt on Vegetative Vigor.

Species	Results summary for height (lbs ai/A)									
	Height (cm)	NOEC	EC_{05}	95%CI	EC_{25}	95%CI	EC_{50}	95%CI	slope	Std err
Corn	92.9-110.4	0.67	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Onion	13.2-29.9	0.074	NC	NC	0.278	NC	1.13	NC	NC	NC
Ryegrass	24.9-25.5	2.0	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Wheat	38.8-55.1	0.22	NC	NC	1.47	NC	>2.0	NC	NC	NC
Cabbage	22.9-28.5	0.67	NC	NC	>0.67	NC	>0.67	NC	NC	NC
Carrot	0.50-1.12	0.22	NC	NC	>0.22	NC	>0.22	NC	NC	NC
Lettuce	19.4-22.0	0.025	NC	NC	>0.025	NC	>0.025	NC	NC	NC
Oilseed Rape	34.3-35.8	0.22	NC	NC	>0.22	NC	>0.22	NC	NC	NC
Soybean	14.9-46.3	0.0010	NC	NC	0.000807	NC	0.00548	NC	NC	NC
Tomato	19.6-54.6	0.0027	NC	NC	0.00584	NC	0.0146	NC	NC	NC

Table 5b: Reported effect of BAPMA Salt on Vegetative Vigor.

Species	Results summary for survival (lbs ai/A)									
	%	NOEC	EC_{05}	95%CI	EC_{25}	95%CI	EC_{50}	95%CI	slope	Std err
Corn	100	2.0	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Onion	14-100	0.22	NC	NC	0.651	NC	0.996	NC	NC	NC
Ryegrass	96-100	2.0	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Wheat	96-100	2.0	NC	NC	>2.0	NC	>2.0	NC	NC	NC
Cabbage	100	0.67	NC	NC	>0.67	NC	>0.67	NC	NC	NC
Carrot	80-96	0.22	NC	NC	>0.22	NC	>0.22	NC	NC	NC
Lettuce	90-100	0.025	NC	NC	>0.025	NC	>0.025	NC	NC	NC
Oilseed Rape	96-100	0.22	NC	NC	>0.22	NC	>0.22	NC	NC	NC
Soybean	100	0.025	NC	NC	>0.025	NC	>0.025	NC	NC	NC
Tomato	76-100	0.0082	NC	NC	>0.025	NC	>0.025	NC	NC	NC

Plant Injury Index											
Control	Corn	Onion	Ryegrass	Wheat	Cabbage	Carrot	Lettuce	Oilseed Rape	Soybean	Tomato	Adjuvant control
0-26	0-14	0-100	0-20	0-38	0-40	0-72	0-46	0-44	0-56	0-92	0-58

0- No effect; 10-30- Slight effect; 40-60- Moderate effect; 70-90- Severe effect; 100- Complete effect

C. VERIFICATION OF STATISTICAL RESULTS BY THE REVIEWER:

Statistical Method(s): All analyses were conducted using the negative control only. Analysis was conducted using CETIS (version 1.8.7.4, using the backend setting created on 1/30/13). All endpoints for which replicate data were provided were examined graphically using graphs to determine if they exhibited a dose-dependent response, which was ultimately used to select the multiple comparison tests to detect the NOAEC. Data for each endpoint were tested to determine if their distributions were normal and if their variances were homogeneous using Shapiro-Wilk's and Levene's tests, respectively. Data that satisfied these assumptions were subjected to Dunnett's and William's tests and data that did not satisfy these assumptions were subjected to the non-parametric MannWhitney-U and Jonckheere's tests.

All analyses were conducted using the mean measured application rates of lbs Dicamba per acre (lbs ai/A).

Table 6: Effect of BAPMA Salt on Vegetative Vigor

Species	**Results summary for biomass (lbs ai/A)**									
	Weight (g)	NOEC	EC_{05}	95%CI	EC_{25}	95%CI	EC_{50}	95%CI	slope	95%CI
Corn	3.43-6.86	0.0224	0.027	NA-0.0774	0.364	0.221-0.567	2.22	1.33-3.7	NA	NA
Onion	0.0257-0.223	0.0721	0.028	NA-0.0742	0.0924	0.0402-0.161	0.212	0.139-0.323	NA	NA
Ryegrass	0.457-0.599	0.0721	0.00432	NA-0.0696	2.42	0.428-10.5	197	1.06-36800	NA	NA
Wheat	0.417-1.27	0.0721	0.047	0.00467-0.089	0.272	0.191-0.372	0.922	0.756-1.12	NA	NA
Cabbage	1.51-3.46	0.024	0.0134	0.00209-0.0279	0.12	0.0812-0.171	0.553	0.405-0.757	NA	NA
Carrot	0.495-1.12	0.0076	0.00388	NA-0.0108	0.0343	0.018-0.0589	0.156	0.0996-0.245	NA	NA
Lettuce	2.48-4.09	0.0082	0.00463	NA-0.00781	0.0162	0.0122-0.0207	0.0388	0.0249-0.0606	NA	NA
Oilseed Rape	3.39-5.27	0.0661	0.0146	NA-0.038	0.125	0.0754-0.193	0.554	0.185-1.66	NA	NA
Soybean	1.94-5.21	<0.0001	0.0000617	0.0000151-0.000137	0.00137	0.00102-0.00181	0.0119	0.00965-0.0146	NA	NA
Tomato	1.49-5.46	<0.0003	0.000922	NA-0.00173	0.00404	0.00267-0.00571	0.0113	0.00898-0.0141	NA	NA

Table 6a: Effect of BAPMA Salt on Vegetative Vigor.

Species	Results summary for height (lbs ai/A)									
	Height (cm)	NOEC	EC_{05}	95%CI	EC_{25}	95%CI	EC_{50}	95%CI	slope	95%CI
Corn	54-71.3	0.0661	0.0586	0.0183-0.126	2.31	1.38-3.69	29.6	7.43-118	NA	NA
Onion	13.2-29.8	0.0721	0.051	NA-0.101	0.293	0.199-0.41	0.987	0.737-1.32	NA	NA
Ryegrass	18.1-19.7	0.6474	0.908	0.201-2.22	35.1	NA-2270	444	NA	NA	NA
Wheat	38.8-54	0.0721	0.14	0.0521-0.25	1.44	1.1-1.85	7.29	3.61-14.7	NA	NA
Cabbage	22.8-28.5	0.6474	>0.6474	NA	>0.6474	NA	>0.6474	NA	NA	NA
Carrot	25.1-27.8	0.0224	0.0322	0.00289-0.127	6.76	NA-809	278	NA	NA	NA
Lettuce	19-21.4	0.024	>0.024	NA	>0.024	NA	>0.024	NA	NA	NA
Oilseed Rape	34.3-35.8	0.2113	23.3	NA	247000000	NA	188000000	NA	NA	NA
Soybean	14.9-45.9	0.0001	0.00000537	0.0000197-0.0001	0.000826	0.000664-0.00102	0.00552	0.00485-0.00627	NA	NA
Tomato	19.5-54.6	0.0009	0.000344	NA-0.000726	0.00247	0.00161-0.0036	0.00976	0.00735-0.013	NA	NA

Table 6b: Effect of BAPMA Salt on Vegetative Vigor.

Species	Results summary for survival (lbs ai/A)									
	%	NOEC	EC_{05}	95%CI	EC_{25}	95%CI	EC_{50}	95%CI	slope	95%CI
Corn	100	1.9172	NA	NA	>1.9172	NA	>1.9172	NA	NC	NC
Onion	13.3-100	0.0721	0.285	0.15-0.405	0.574	0.402-0.737	0.934	0.727-1.22	3.19	2.12-4.26
Ryegrass	96.7-100	1.9699	>1.9699	NA	>1.9699	NA	>1.9699	NA	NA	NA
Wheat	96.7-100	1.9699	>1.9699	NA	>1.9699	NA	>1.9699	NA	NA	NA
Cabbage	100	0.6474	>0.6474	NA	>0.6474	NA	>0.6474	NA	NA	NA
Carrot	80-96.7	0.0661	0.0305	NA	0.752	NA	6.98	NA	0.697	-0.749-2.14
Lettuce	90-100	0.024	>0.024	NA	>0.024	NA	>0.024	NA	NA	NA
Oilseed Rape	96.7-100	0.0224	0.243	NA	2.9	NA	16.3	NA	0.9	0.434
Soybean	100	0.0245	>0.0245	NA	>0.0245	NA	>0.0245	NA	NA	NA
Tomato	84-100	0.0224	>0.0224	NA	>0.0224	NA	>0.0224	NA	NA	NA

Plant Injury Index											
Control	Corn	Onion	Ryegrass	Wheat	Cabbage	Carrot	Lettuce	Oilseed Rape	Soybean	Tomato	Adjuvant control
0-26	0-14	0-100	0-20	0-38	0-40	0-72	0-46	0-44	0-56	0-92	0-58

0- No effect; 10-30- Slight effect; 40-60- Moderate effect; 70-90- Severe effect; 100- Complete effect

Monocot

EC_{50}/IC_{50}: 0.212 lbs ai/A 95% C.I.: 0.139-0.323 lb ai/A
EC_{25}/IC_{25}: 0.0924 lbs ai/A 95% C.I.: 0.0402-0.161 lb ai/A
EC_{05}/IC_{05}: 0.028 lbs ai/A 95% C.I.: NA-0.0742 lb ai/A
NOAEC: 0.0721 lbs ai/A
Slope: NA 95% C.I.: NA
Most sensitive monocot: Onion
Most sensitive parameter: Biomass

Dicot

EC_{50}/IC_{50}: 0.00552 lbs ai/A 95% C.I.: 0.00485-0.00627
EC_{25}/IC_{25}: 0.000826 lbs ai/A 95% C.I.: 0.000664-0.00102
EC_{05}/IC_{05}: 0.00000537 lbs ai/A 95% C.I.: 0.0000197-0.0001
NOAEC: 0.0001 lbs ai/A
Slope: NA 95% C.I.: NA
Most sensitive dicot: Soybean
Most sensitive parameter: Height

D. STUDY DEFICIENCIES:

There were no study deficiencies.

E. REVIEWER'S COMMENTS:

The reviewer's and the study authors' results for the most sensitive monocot and dicot were similar; however the study author's identified soybean dry weight as the most sensitive endpoint while the reviewer identified soybean height. The resulting NOAEC values were similar (0.000111 vs 0.0001 lb a.i./A, respectively). The reviewer obtained 95% confidence limits for most species and endpoints, and used measured test concentrations for statistical analysis, therefore the reviewer's results are presented in the Executive Summary and Conclusions sections of this DER.

The cation exchange capacity and moisture of the soil were not reported.

The % relative humidity ranged from 20.6 to 95.1% for all species; OPPTS guidelines suggest that relative humidity range from 70 ± 5% during light periods and 90 ± 5% % during dark periods. While the study authors did not report when the humidity readings were taken, the lower values exceed light and dark recommendations.

Temperatures ranged from 17.02 to 38.97°C for all species; OPPTS guidelines suggest day temperatures of 25 ± 3°C and night temperatures of 20 ± 3°C. The study authors did not differentiate between day and night

temperatures; however, the highest temperatures reported are higher than either the day or night recommendations.

There were no effects of the adjuvant application on any species and the adjuvent was not significantly different compared to the negative controls.

The in-life portion of the test with corn, carrot, oilseed rape and tomato was conducted from August 10 to 31, 2011. The test with onion, ryegrass, wheat, cabbage, and lettuce was conducted from September 2 to 23, 2011. The test with soybean was conducted from October 12 to November 2, 2011.

F. CONCLUSIONS:

This study is **acceptable**. The most sensitive monocot species was onion based on biomass, with NOAEC and EC_{25} values of 0.0721 and 0.0924 lbs ai/A, respectively. The most sensitive dicot was soybean, based on height, with NOAEC and EC_{25} values of 0.0001 and 0.000826 lbs ai/A, respectively.

Most sensitive monocot and EC_{25}: Onion (biomass; 0.0924 lbs ai/A)
Most sensitive dicot and EC_{25}: Soybean (height; 0.000826 lbs ai/A)

III. REFERENCES:

1. U.S. Environmental Protection Agency. 1996. Series 850 – Ecological Effects Test Guidelines (*draft*), OPPTS Number 850.4150: Vegetative Vigor, Tier II.

2. Frans, Robert E. and Ronald E. Talbert. 1977. Design of Field Experiments and the Measurement and Analysis of Plant Responses. Pages 15-23 *in* B. Truelove, ed. Research Methods in Weed Science. Southern Weed Science Society, Auburn University, Alabama.

3. SAS Institute, Inc. 1999. SAS Proprietary Software Version 8, Cary, NC, SAS Institute, Inc.

4. Bruce, Robert D. and Donald J. Versteeg. 1992. A Statistical Procedure for Modeling Continuous Toxicity Data. *Environmental Toxicology and Chemistry*. 11: 1485-1494.

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Batch ID:	11-2230-6822	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:47	**Species:**	Brassica oleracea	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	

Sample ID:	15-4885-1305	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:47	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
20-3042-7429	Height	0.6474	>0.6474	NA	12.1%		Dunnett Multiple Comparison Test
20-3857-8406	Height	0.6474	>0.6474	NA	9.22%		Williams Multiple Comparison Test
10-1678-6470	Survival	0.6474	>0.6474	NA	NA		Jonckheere-Terpstra Step-Down Test
02-6786-4839	Survival	0.6474	>0.6474	NA	NA		Mann-Whitney U Two-Sample Test
05-6106-2662	Weight	0.024	0.0721	0.0416	15.1%		Dunnett Multiple Comparison Test
12-5240-3798	Weight	0.024	0.0721	0.0416	11.5%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
20-7913-2332	Weight	IC5	0.0134	0.00209	0.0279		Nonlinear Regression
		IC10	0.0305	0.0134	0.0532		
		IC25	0.12	0.0812	0.171		
		IC50	0.553	0.405	0.757		

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	23.1	21	25.2	20.4	25.2	0.826	2.02	8.76%	0.0%
0	Negative Control	6	22.8	20.8	24.7	20.8	26	0.763	1.87	8.21%	1.44%
0.0027		6	23.3	21.8	24.8	21.4	25.4	0.586	1.43	6.17%	-0.72%
0.0082		6	23	20.2	25.9	20.4	27.8	1.1	2.7	11.7%	0.29%
0.024		6	25.7	24	27.3	24	27.6	0.638	1.56	6.09%	-11.1%
0.0721		6	26.2	24.6	27.7	24	28.2	0.596	1.46	5.58%	-13.3%
0.2111		6	28.5	25.6	31.4	24.8	33.2	1.14	2.8	9.82%	-23.4%
0.6474		6	27.2	25.4	28.9	25	29.8	0.686	1.68	6.18%	-17.6%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	0	0	0.0%	0.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	0	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	0	0	0.0%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	3.39	2.61	4.16	2.28	4.26	0.302	0.739	21.8%	0.0%
0	Negative Control	6	3.25	2.93	3.57	2.83	3.59	0.125	0.306	9.42%	4.13%
0.0027		6	3.46	3.06	3.87	2.86	3.83	0.158	0.386	11.1%	-2.16%
0.0082		6	3.08	2.57	3.59	2.42	3.84	0.199	0.488	15.9%	9.15%
0.024		6	2.89	2.7	3.09	2.56	3.07	0.0746	0.183	6.32%	14.6%
0.0721		6	2.71	2.12	3.3	2.14	3.71	0.23	0.563	20.8%	20.0%
0.2111		6	2.28	2.13	2.44	2.02	2.45	0.0613	0.15	6.58%	32.6%
0.6474		6	1.51	1.31	1.72	1.25	1.79	0.0798	0.195	12.9%	55.4%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	20.4	23.4	20.8	24.4	25.2	24.4
0	Negative Control	22.4	22	20.8	23.8	21.6	26
0.0027		25.4	23.2	21.4	24	22	23.6
0.0082		23.6	20.8	22	23.6	20.4	27.8
0.024		27.6	24.8	25.4	24.6	24	27.6
0.0721		26.4	24	25.4	25.8	28.2	27.2
0.2111		28.6	33.2	29.2	24.8	28.4	26.8
0.6474		27	25.8	29.8	25	27.8	27.6

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.0027		1	1	1	1	1	1
0.0082		1	1	1	1	1	1
0.024		1	1	1	1	1	1
0.0721		1	1	1	1	1	1
0.2111		1	1	1	1	1	1
0.6474		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	2.28	3.41	2.82	3.54	4.26	4.02
0	Negative Control	2.83	3.41	3.18	3.59	2.97	3.51
0.0027		3.16	2.86	3.68	3.79	3.83	3.45
0.0082		2.87	2.91	3.4	3.03	2.42	3.84
0.024		2.56	2.98	3.02	2.86	2.88	3.07
0.0721		2.32	2.14	2.94	2.48	2.67	3.71
0.2111		2.02	2.32	2.21	2.35	2.45	2.35
0.6474		1.55	1.66	1.79	1.43	1.39	1.25

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-3042-7429	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:25	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	11-2230-6822	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:47	**Species:**	Brassica oleracea	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-4885-1305	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:47	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	12.1%	0.6474	>0.6474	NA	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0027	-0.433	2.38	2.76	10	0.9436	CDF	Non-Significant Effect
		0.0082	-0.231	2.38	2.76	10	0.9106	CDF	Non-Significant Effect
		0.024	-2.51	2.38	2.76	10	0.9999	CDF	Non-Significant Effect
		0.0721	-2.94	2.38	2.76	10	1.0000	CDF	Non-Significant Effect
		0.2111	-4.96	2.38	2.76	10	1.0000	CDF	Non-Significant Effect
		0.6474	-3.81	2.38	2.76	10	1.0000	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	181.5562	30.25937	6	7.55	<0.0001	Significant Effect
Error	140.3	4.008572	35			
Total	321.8562		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.71	16.8	0.5813	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.963	0.927	0.1954	Normal Distribution

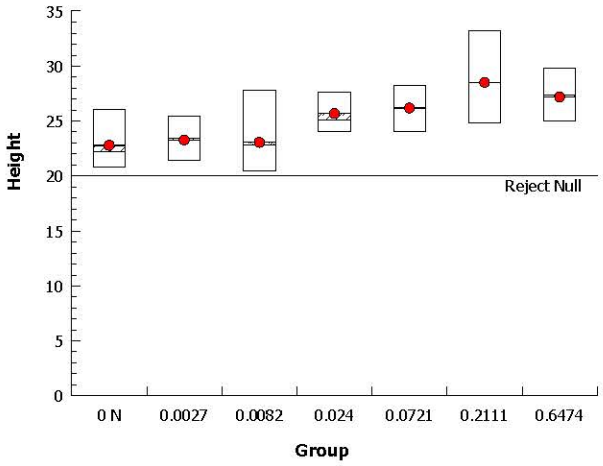
Height Summary

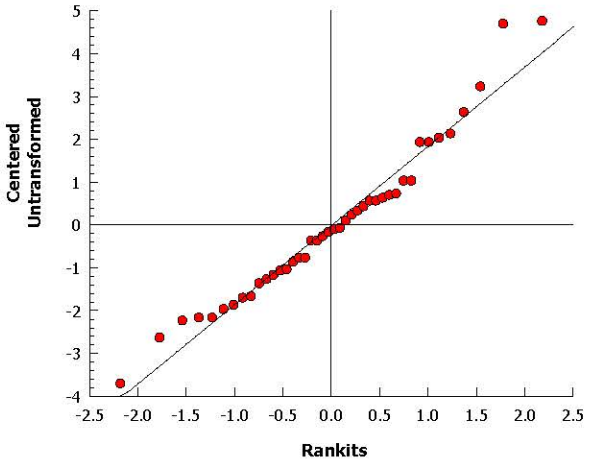
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	22.8	20.8	24.7	22.2	20.8	26	0.763	8.21%	0.0%
0.0027		6	23.3	21.8	24.8	23.4	21.4	25.4	0.586	6.17%	-2.2%
0.0082		6	23	20.2	25.9	22.8	20.4	27.8	1.1	11.7%	-1.17%
0.024		6	25.7	24	27.3	25.1	24	27.6	0.638	6.09%	-12.7%
0.0721		6	26.2	24.6	27.7	26.1	24	28.2	0.596	5.58%	-14.9%
0.2111		6	28.5	25.6	31.4	28.5	24.8	33.2	1.14	9.82%	-25.2%
0.6474		6	27.2	25.4	28.9	27.3	25	29.8	0.686	6.18%	-19.3%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-3042-7429	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:25	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-3857-8406	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:26	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	11-2230-6822	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:47	**Species:**	Brassica oleracea	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-4885-1305	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:47	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	9.22%	0.6474	>0.6474	NA	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0027	-0.433	1.69	1.95	10	>0.05	CDF	Non-Significant Effect
		0.0082	-0.231	1.77	2.04	10	>0.05	CDF	Non-Significant Effect
		0.024	-1.06	1.79	2.07	10	>0.05	CDF	Non-Significant Effect
		0.0721	-1.53	1.8	2.09	10	>0.05	CDF	Non-Significant Effect
		0.2111	-2.21	1.81	2.09	10	>0.05	CDF	Non-Significant Effect
		0.6474	-2.48	1.82	2.1	10	>0.05	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	181.5562	30.25937	6	7.55	<0.0001	Significant Effect
Error	140.3	4.008572	35			
Total	321.8562		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.71	16.8	0.5813	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.963	0.927	0.1954	Normal Distribution

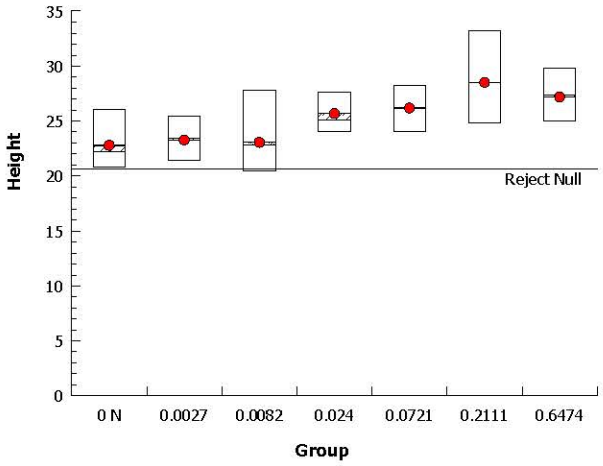
Height Summary

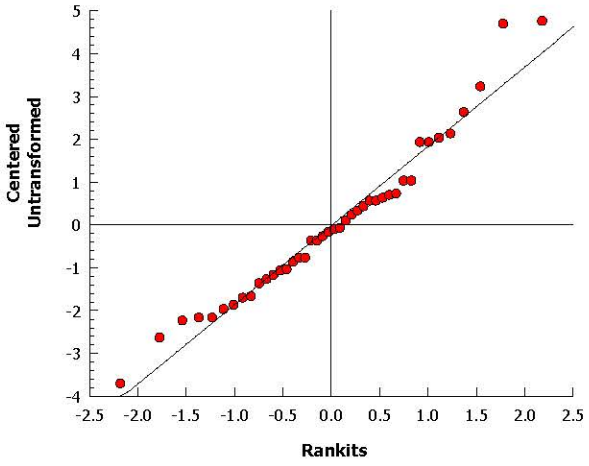
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	22.8	20.8	24.7	22.2	20.8	26	0.763	8.21%	0.0%
0.0027		6	23.3	21.8	24.8	23.4	21.4	25.4	0.586	6.17%	-2.2%
0.0082		6	23	20.2	25.9	22.8	20.4	27.8	1.1	11.7%	-1.17%
0.024		6	25.7	24	27.3	25.1	24	27.6	0.638	6.09%	-12.7%
0.0721		6	26.2	24.6	27.7	26.1	24	28.2	0.596	5.58%	-14.9%
0.2111		6	28.5	25.6	31.4	28.5	24.8	33.2	1.14	9.82%	-25.2%
0.6474		6	27.2	25.4	28.9	27.3	25	29.8	0.686	6.18%	-19.3%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-3857-8406	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:26	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	02-6786-4839	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:25	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	11-2230-6822	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:47	**Species:**	Brassica oleracea	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-4885-1305	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:47	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.6474	>0.6474	NA	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0027	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0082	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.024	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0721	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.2111	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.6474	18	NA	1	10	1.0000	Exact	Non-Significant Effect

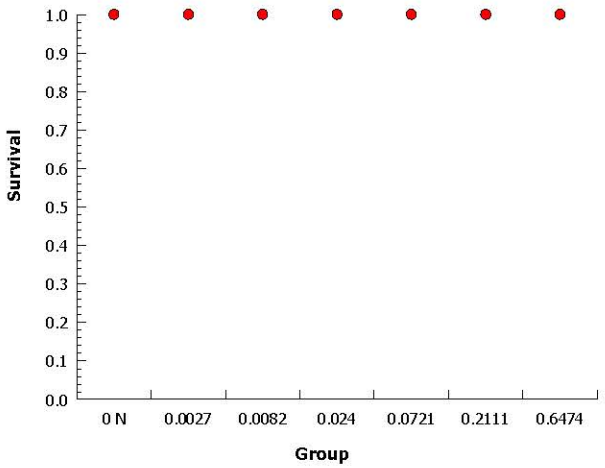
ANOVA Table

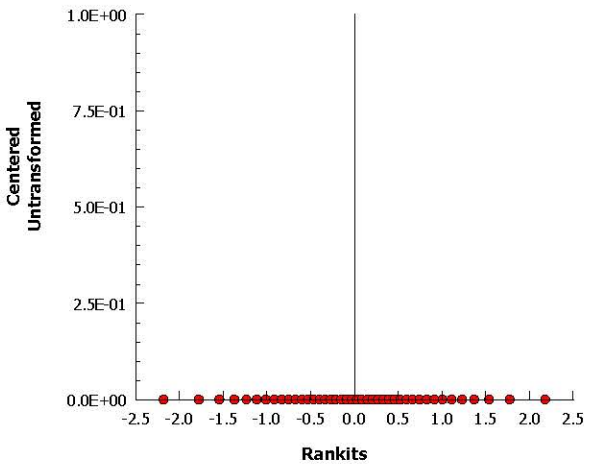
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	6	65500	<0.0001	Significant Effect
Error	0	0	35			
Total	0		41			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	10-1678-6470	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:26	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	11-2230-6822	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:47	**Species:**	Brassica oleracea	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-4885-1305	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:47	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.6474	>0.6474	NA	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0027	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0082	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.024	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0721	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.2111	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.6474	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect

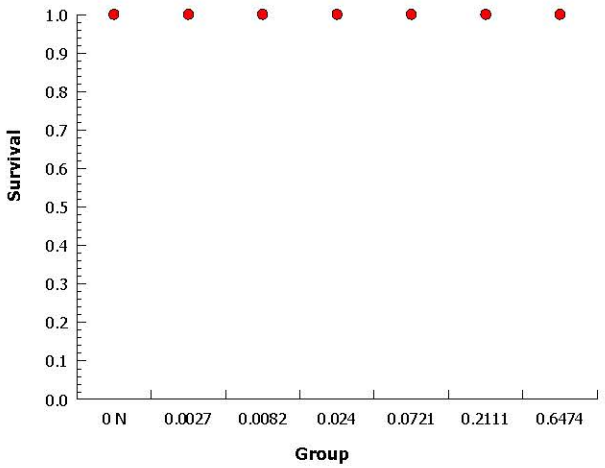
ANOVA Table

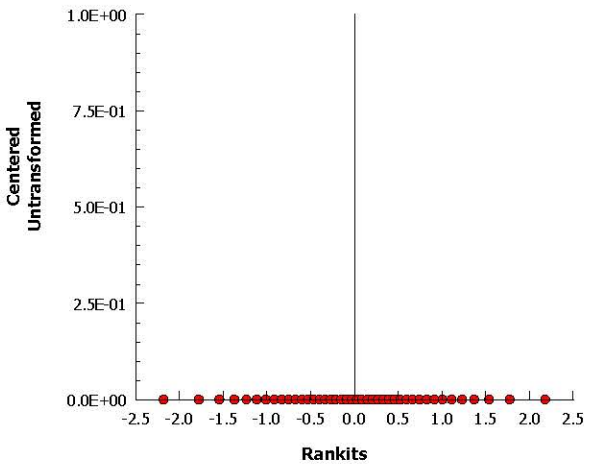
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	6	65500	<0.0001	Significant Effect
Error	0	0	35			
Total	0		41			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	05-6106-2662	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:25	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	11-2230-6822	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:47	**Species:**	Brassica oleracea	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-4885-1305	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:47	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	15.1%	0.024	0.0721	0.0416	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0027	-1.04	2.38	0.491	10	0.9892	CDF	Non-Significant Effect
		0.0082	0.825	2.38	0.491	10	0.5329	CDF	Non-Significant Effect
		0.024	1.71	2.38	0.491	10	0.1752	CDF	Non-Significant Effect
		0.0721*	2.61	2.38	0.491	10	0.0303	CDF	Significant Effect
		0.2111*	4.68	2.38	0.491	10	0.0001	CDF	Significant Effect
		0.6474*	8.43	2.38	0.491	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	15.81562	2.635937	6	20.7	<0.0001	Significant Effect
Error	4.459016	0.1274005	35			
Total	20.27464		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	13.4	16.8	0.0368	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.966	0.927	0.2348	Normal Distribution

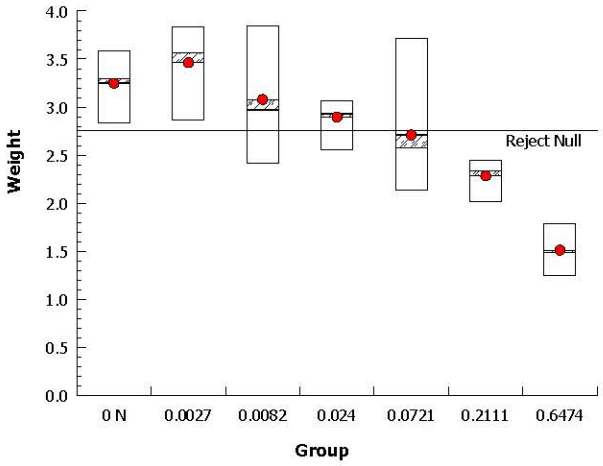
Weight Summary

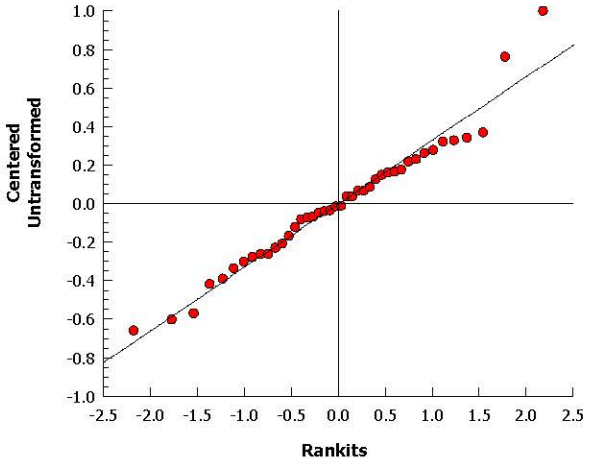
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	3.25	2.93	3.57	3.3	2.83	3.59	0.125	9.42%	0.0%
0.0027		6	3.46	3.06	3.87	3.57	2.86	3.83	0.158	11.1%	-6.57%
0.0082		6	3.08	2.57	3.59	2.97	2.42	3.84	0.199	15.9%	5.23%
0.024		6	2.89	2.7	3.09	2.93	2.56	3.07	0.0746	6.32%	10.9%
0.0721		6	2.71	2.12	3.3	2.58	2.14	3.71	0.23	20.8%	16.6%
0.2111		6	2.28	2.13	2.44	2.34	2.02	2.45	0.0613	6.58%	29.7%
0.6474		6	1.51	1.31	1.72	1.49	1.25	1.79	0.0798	12.9%	53.5%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	05-6106-2662	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:25	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-5240-3798	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:26	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	11-2230-6822	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:47	**Species:**	Brassica oleracea	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-4885-1305	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:47	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	11.5%	0.024	0.0721	0.0416	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0027	-1.04	1.69	0.348	10	>0.05	CDF	Non-Significant Effect
		0.0082	0.825	1.77	0.364	10	>0.05	CDF	Non-Significant Effect
		0.024	1.71	1.79	0.369	10	>0.05	CDF	Non-Significant Effect
		0.0721*	2.61	1.8	0.372	10	<0.05	CDF	Significant Effect
		0.2111*	4.68	1.81	0.373	10	<0.05	CDF	Significant Effect
		0.6474*	8.43	1.82	0.374	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	15.81562	2.635937	6	20.7	<0.0001	Significant Effect
Error	4.459016	0.1274005	35			
Total	20.27464		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	13.4	16.8	0.0368	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.966	0.927	0.2348	Normal Distribution

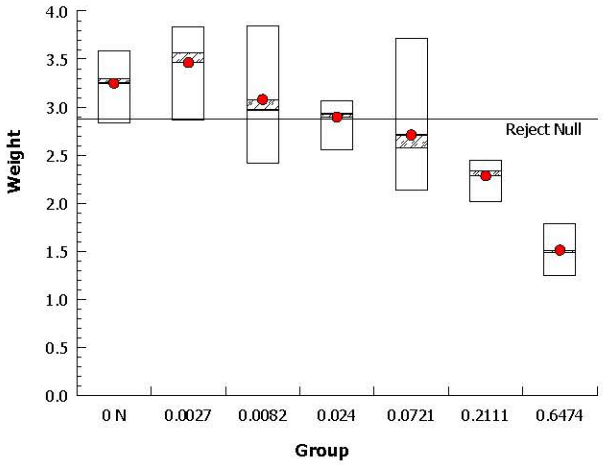
Weight Summary

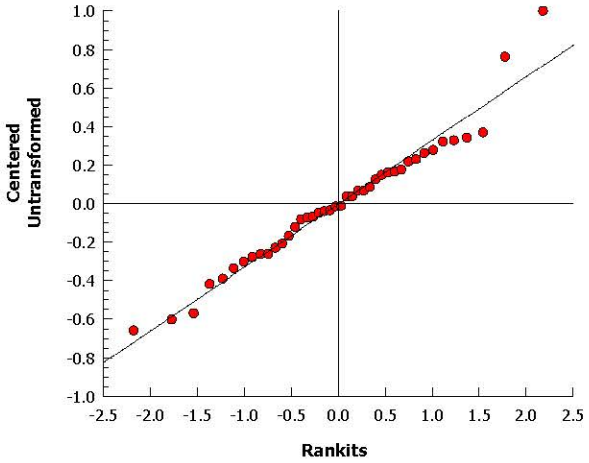
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	3.25	2.93	3.57	3.3	2.83	3.59	0.125	9.42%	0.0%
0.0027		6	3.46	3.06	3.87	3.57	2.86	3.83	0.158	11.1%	-6.57%
0.0082		6	3.08	2.57	3.59	2.97	2.42	3.84	0.199	15.9%	5.23%
0.024		6	2.89	2.7	3.09	2.93	2.56	3.07	0.0746	6.32%	10.9%
0.0721		6	2.71	2.12	3.3	2.58	2.14	3.71	0.23	20.8%	16.6%
0.2111		6	2.28	2.13	2.44	2.34	2.02	2.45	0.0613	6.58%	29.7%
0.6474		6	1.51	1.31	1.72	1.49	1.25	1.79	0.0798	12.9%	53.5%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-5240-3798	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:26	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-7913-2332	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:25	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	11-2230-6822	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:47	**Species:**	Brassica oleracea	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-4885-1305	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:47	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
6	4.04	-1.45	3.13	0.7544	Yes	0.915	2.64	0.4661	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.0134	0.00209	0.0279
IC10	0.0305	0.0134	0.0532
IC25	0.12	0.0812	0.171
IC50	0.553	0.405	0.757

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	3.29	0.11	3.08	3.51	30	<0.0001	Significant Parameter
C	2.26	0.389	1.5	3.02	5.82	<0.0001	Significant Parameter
D	0.553	0.0975	0.362	0.745	5.67	<0.0001	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	5.668531	5.668531	1	128	<0.0001	Significant
Lack of Fit	0.163572	0.040893	4	0.915	0.4661	Non-Significant
Pure Error	1.564187	0.044691	35			
Residual	1.727759	0.044302	39			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	1.73	54.6	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	1.71	54.6	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	11.2	12.6	0.0833	Equal Variances
	Mod Levene Equality of Variance	1.29	2.37	0.2853	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.98	0.947	0.6555	Normal Distribution
	Anderson-Darling A2 Normality	0.231	2.49	0.8345	Normal Distribution

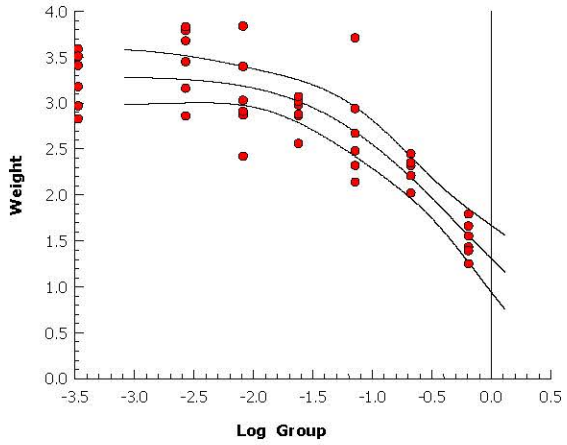
Weight Summary

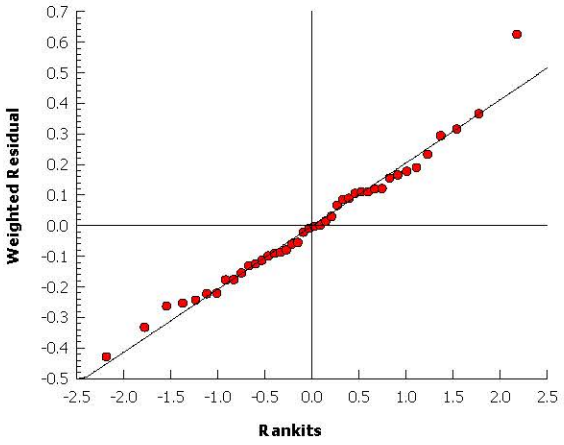
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	3.25	2.83	3.59	0.125	0.306	9.42%	0.0%
0.0027		6	3.46	2.86	3.83	0.158	0.386	11.1%	-6.57%
0.0082		6	3.08	2.42	3.84	0.199	0.488	15.9%	5.23%
0.024		6	2.89	2.56	3.07	0.0746	0.183	6.32%	10.9%
0.0721		6	2.71	2.14	3.71	0.23	0.563	20.8%	16.6%
0.2111		6	2.28	2.02	2.45	0.0613	0.15	6.58%	29.7%
0.6474		6	1.51	1.25	1.79	0.0798	0.195	12.9%	53.5%

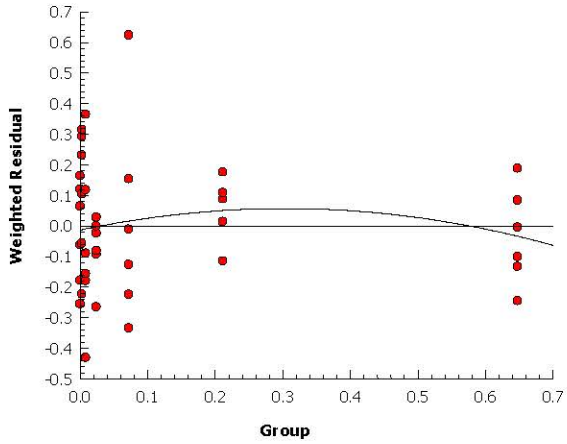
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

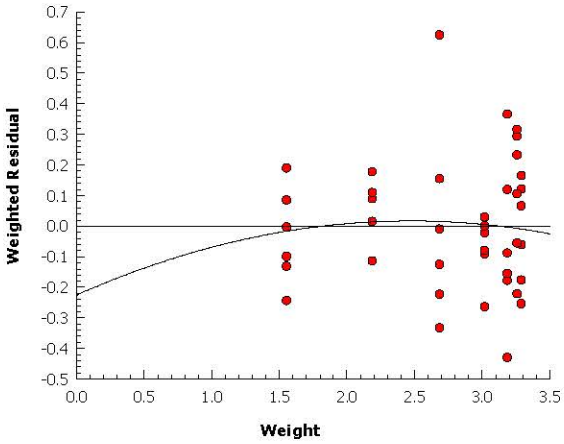
Analysis ID:	20-7913-2332	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:25	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	

Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
13-9353-4378	Height	0.2113	>0.2113	NA	10.7%		Dunnett Multiple Comparison Test
19-9772-3513	Height	0.0224	0.0661	0.03848	8.17%		Williams Multiple Comparison Test
13-1345-2315	Survival	0.0661	0.2113	0.1182	NA		Jonckheere-Terpstra Step-Down Test
07-6814-6150	Survival	0.2113	>0.2113	NA	17.4%		Mann-Whitney U Two-Sample Test
19-0277-9953	Weight	0.0076	0.0224	0.01305	22.2%		Dunnett Multiple Comparison Test
01-0412-6339	Weight	0.0076	0.0224	0.01305	16.9%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
19-3186-4184	Height	IC5	0.0322	0.00289	0.127		Nonlinear Regression
		IC10	0.238	0.0212	1.09		
		IC25	6.76	N/A	809		
		IC50	278	N/A	N/A		
16-1377-4813	Survival	EC5	0.0305	N/A	N/A		Linear Regression (MLE)
		EC10	0.101	N/A	N/A		
		EC25	0.752	N/A	N/A		
		EC50	6.98	N/A	N/A		
14-3353-9560	Weight	IC5	0.00388	N/A	0.0108		Nonlinear Regression
		IC10	0.00878	0.00177	0.0195		
		IC25	0.0343	0.018	0.0589		
		IC50	0.156	0.0996	0.245		

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	26.3	23.4	29.2	21.3	29.2	1.12	2.75	10.5%	0.0%
0	Negative Control	6	27.8	25.3	30.4	24	30.8	0.997	2.44	8.77%	-5.96%
0.0009		6	26.8	23.8	29.8	23.2	31.3	1.16	2.85	10.6%	-2.09%
0.0026		6	27.5	26	29	25.2	29.4	0.596	1.46	5.3%	-4.7%
0.0076		6	27.1	26	28.1	26.2	28.8	0.408	0.999	3.69%	-3.05%
0.0224		6	26.7	24.2	29.3	23.8	29.7	1	2.45	9.17%	-1.78%
0.0661		6	25.5	23.8	27.3	23	27	0.685	1.68	6.57%	2.73%
0.2113		6	25.1	22.4	27.9	22.3	29.3	1.07	2.63	10.5%	4.38%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	0.8	0.612	0.988	0.6	1	0.073	0.179	22.4%	0.0%
0	Negative Control	6	0.9	0.785	1	0.8	1	0.0447	0.11	12.2%	-12.5%
0.0009		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	-20.8%
0.0026		6	0.9	0.724	1	0.6	1	0.0683	0.167	18.6%	-12.5%
0.0076		6	0.9	0.785	1	0.8	1	0.0447	0.11	12.2%	-12.5%
0.0224		6	0.9	0.724	1	0.6	1	0.0683	0.167	18.6%	-12.5%
0.0661		6	0.833	0.588	1	0.4	1	0.0955	0.234	28.1%	-4.17%
0.2113		6	0.8	0.667	0.933	0.6	1	0.0516	0.126	15.8%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1.12	0.866	1.37	0.75	1.44	0.0975	0.239	21.4%	0.0%
0	Negative Control	6	1.12	0.917	1.33	0.96	1.45	0.0795	0.195	17.4%	-0.45%
0.0009		6	0.97	0.755	1.19	0.73	1.33	0.0838	0.205	21.2%	13.1%
0.0026		6	1.12	0.923	1.32	0.76	1.3	0.0774	0.19	16.9%	-0.45%
0.0076		6	1.06	0.832	1.29	0.74	1.32	0.0892	0.218	20.6%	4.93%
0.0224		6	0.823	0.699	0.948	0.71	1.02	0.0484	0.119	14.4%	26.3%
0.0661		6	0.708	0.518	0.898	0.58	1.03	0.0739	0.181	25.6%	36.6%
0.2113		6	0.495	0.356	0.634	0.31	0.64	0.0542	0.133	26.8%	55.7%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	26.5	26.6	29.2	25.7	28.3	21.3
0	Negative Control	30.8	27.2	24	29	26.5	29.5
0.0009		31.3	23.2	26.4	25.2	28.8	26
0.0026		28	26.7	25.2	27.3	29.4	28.4
0.0076		28.8	27.2	27.5	26.4	26.3	26.2
0.0224		29.7	25.3	27.6	23.8	24.8	29.2
0.0661		27	23	27	24	25.8	26.5
0.2113		22.3	25	25.8	29.3	22.3	26

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	0.8	1	1	0.6	0.8	0.6
0	Negative Control	1	1	1	0.8	0.8	0.8
0.0009		0.8	1	1	1	1	1
0.0026		1	0.6	1	0.8	1	1
0.0076		0.8	1	0.8	1	0.8	1
0.0224		0.6	0.8	1	1	1	1
0.0661		1	0.8	1	1	0.8	0.4
0.2113		0.8	1	0.8	0.6	0.8	0.8

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1.11	1.29	1.44	1.12	0.99	0.75
0	Negative Control	1.45	1.18	0.97	1.2	0.97	0.96
0.0009		1.33	0.73	0.92	0.9	0.88	1.06
0.0026		1.16	0.76	1.16	1.3	1.24	1.11
0.0076		1.32	0.89	1.25	1.12	1.05	0.74
0.0224		1.02	0.84	0.89	0.71	0.75	0.73
0.0661		0.59	0.58	0.62	0.61	0.82	1.03
0.2113		0.31	0.6	0.59	0.64	0.41	0.42

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	13-9353-4378	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	10.7%	0.2113	>0.2113	NA	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0009	0.812	2.38	2.99	10	0.5391	CDF	Non-Significant Effect
		0.0026	0.266	2.38	2.99	10	0.7727	CDF	Non-Significant Effect
		0.0076	0.612	2.38	2.99	10	0.6310	CDF	Non-Significant Effect
		0.0224	0.878	2.38	2.99	10	0.5080	CDF	Non-Significant Effect
		0.0661	1.82	2.38	2.99	10	0.1464	CDF	Non-Significant Effect
		0.2113	2.17	2.38	2.99	10	0.0775	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	35.34953	5.891589	6	1.25	0.3046	Non-Significant Effect
Error	164.7516	4.70719	35			
Total	200.1012		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	6.73	16.8	0.3469	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.987	0.927	0.9029	Normal Distribution

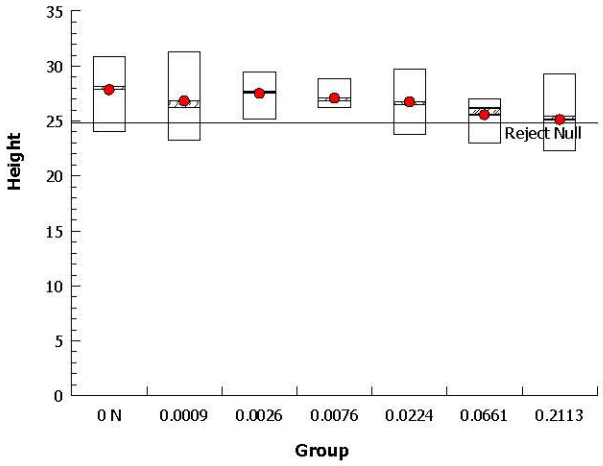
Height Summary

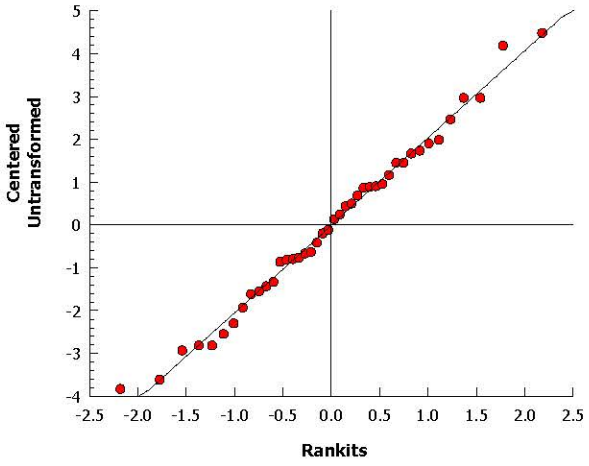
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	27.8	25.3	30.4	28.1	24	30.8	0.997	8.77%	0.0%
0.0009		6	26.8	23.8	29.8	26.2	23.2	31.3	1.16	10.6%	3.65%
0.0026		6	27.5	26	29	27.6	25.2	29.4	0.596	5.3%	1.2%
0.0076		6	27.1	26	28.1	26.8	26.2	28.8	0.408	3.69%	2.75%
0.0224		6	26.7	24.2	29.3	26.5	23.8	29.7	1	9.17%	3.95%
0.0661		6	25.5	23.8	27.3	26.1	23	27	0.685	6.57%	8.2%
0.2113		6	25.1	22.4	27.9	25.4	22.3	29.3	1.07	10.5%	9.76%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	13-9353-4378	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-9772-3513	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:32	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	8.17%	0.0224	0.0661	0.03848	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0009	0.812	1.69	2.12	10	>0.05	CDF	Non-Significant Effect
		0.0026	0.539	1.77	2.21	10	>0.05	CDF	Non-Significant Effect
		0.0076	0.612	1.79	2.24	10	>0.05	CDF	Non-Significant Effect
		0.0224	0.878	1.8	2.26	10	>0.05	CDF	Non-Significant Effect
		0.0661*	1.82	1.81	2.27	10	<0.05	CDF	Significant Effect
		0.2113*	2.17	1.82	2.27	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	35.34953	5.891589	6	1.25	0.3046	Non-Significant Effect
Error	164.7516	4.70719	35			
Total	200.1012		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	6.73	16.8	0.3469	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.987	0.927	0.9029	Normal Distribution

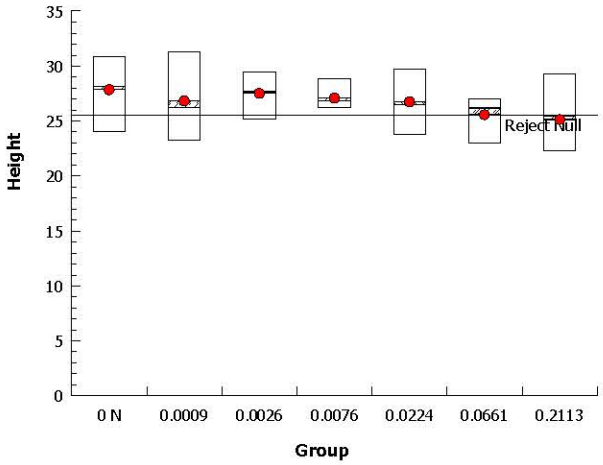
Height Summary

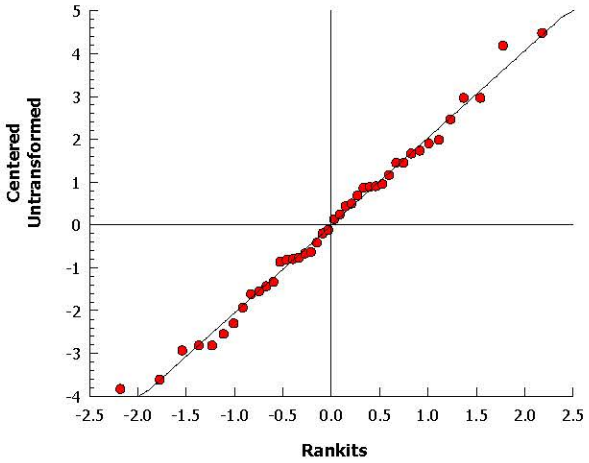
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	27.8	25.3	30.4	28.1	24	30.8	0.997	8.77%	0.0%
0.0009		6	26.8	23.8	29.8	26.2	23.2	31.3	1.16	10.6%	3.65%
0.0026		6	27.5	26	29	27.6	25.2	29.4	0.596	5.3%	1.2%
0.0076		6	27.1	26	28.1	26.8	26.2	28.8	0.408	3.69%	2.75%
0.0224		6	26.7	24.2	29.3	26.5	23.8	29.7	1	9.17%	3.95%
0.0661		6	25.5	23.8	27.3	26.1	23	27	0.685	6.57%	8.2%
0.2113		6	25.1	22.4	27.9	25.4	22.3	29.3	1.07	10.5%	9.76%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-9772-3513	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:32	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	07-6814-6150	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	17.4%	0.2113	>0.2113	NA	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0009	12	NA	2	10	0.9697	Exact	Non-Significant Effect
		0.0026	16.5	NA	2	10	0.6515	Exact	Non-Significant Effect
		0.0076	18	NA	2	10	0.7165	Exact	Non-Significant Effect
		0.0224	16.5	NA	2	10	0.6515	Exact	Non-Significant Effect
		0.0661	19.5	NA	2	10	0.5000	Exact	Non-Significant Effect
		0.2113	25.5	NA	2	10	0.1818	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.1047619	0.01746032	6	0.777	0.5936	Non-Significant Effect
Error	0.7866667	0.02247619	35			
Total	0.8914286		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	6.89	16.8	0.3316	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.888	0.927	0.0006	Non-normal Distribution

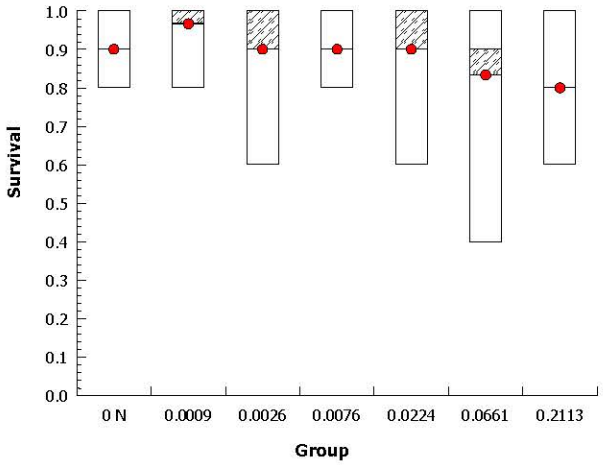
Survival Summary

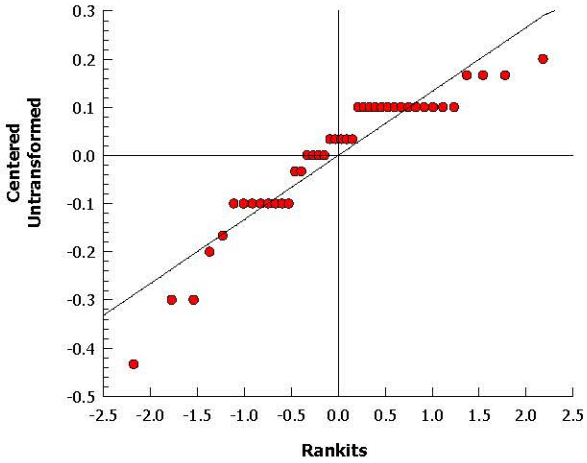
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	0.9	0.785	1	0.9	0.8	1	0.0447	12.2%	0.0%
0.0009		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	-7.41%
0.0026		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	0.0%
0.0076		6	0.9	0.785	1	0.9	0.8	1	0.0447	12.2%	0.0%
0.0224		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	0.0%
0.0661		6	0.833	0.588	1	0.9	0.4	1	0.0955	28.1%	7.41%
0.2113		6	0.8	0.667	0.933	0.8	0.6	1	0.0516	15.8%	11.1%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	07-6814-6150	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	13-1345-2315	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:32	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0661	0.2113	0.1182	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0009	-1.32	1.64	2	-2	0.9070	Asymp	Non-Significant Effect
		0.0026	-0.409	1.64	2	-2	0.6586	Asymp	Non-Significant Effect
		0.0076	0.217	1.64	2	-2	0.4306	Asymp	Non-Significant Effect
		0.0224	0.175	1.64	3	-2	0.4306	Asymp	Non-Significant Effect
		0.0661	0.633	1.64	3	-2	0.2634	Asymp	Non-Significant Effect
		0.2113*	1.65	1.64	3	-2	0.0491	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.1047619	0.01746032	6	0.777	0.5936	Non-Significant Effect
Error	0.7866667	0.02247619	35			
Total	0.8914286		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	6.89	16.8	0.3316	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.888	0.927	0.0006	Non-normal Distribution

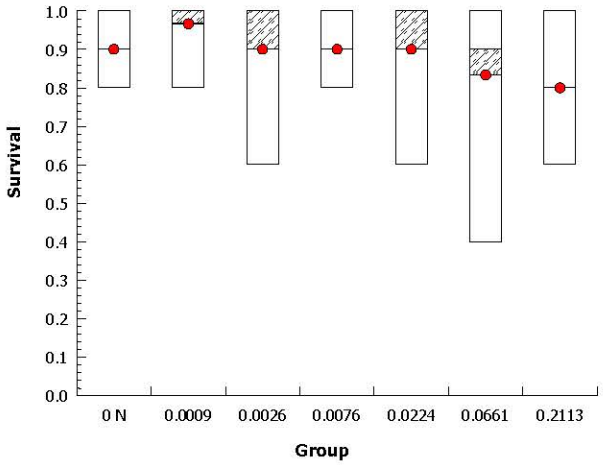
Survival Summary

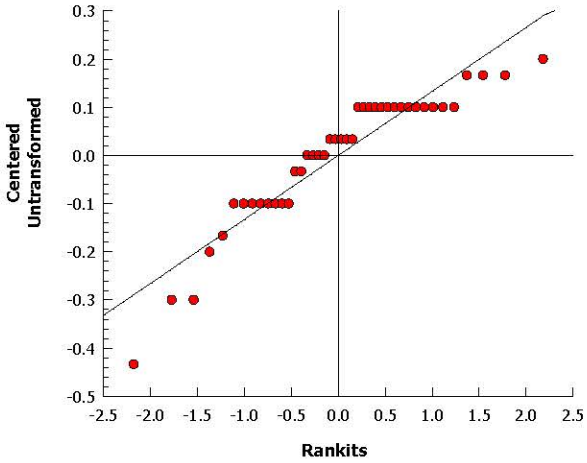
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	0.9	0.785	1	0.9	0.8	1	0.0447	12.2%	0.0%
0.0009		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	-7.41%
0.0026		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	0.0%
0.0076		6	0.9	0.785	1	0.9	0.8	1	0.0447	12.2%	0.0%
0.0224		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	0.0%
0.0661		6	0.833	0.588	1	0.9	0.4	1	0.0955	28.1%	7.41%
0.2113		6	0.8	0.667	0.933	0.8	0.6	1	0.0516	15.8%	11.1%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	13-1345-2315	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:32	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-0277-9953	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	22.2%	0.0076	0.0224	0.01305	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0009	1.45	2.38	0.248	10	0.2597	CDF	Non-Significant Effect
		0.0026	2.86E-07	2.38	0.248	10	0.8571	CDF	Non-Significant Effect
		0.0076	0.576	2.38	0.248	10	0.6472	CDF	Non-Significant Effect
		0.0224*	2.86	2.38	0.248	10	0.0170	CDF	Significant Effect
		0.0661*	3.97	2.38	0.248	10	0.0009	CDF	Significant Effect
		0.2113*	6.01	2.38	0.248	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	2.015681	0.3359468	6	10.3	<0.0001	Significant Effect
Error	1.141017	0.03260048	35			
Total	3.156698		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	2.62	16.8	0.8551	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.98	0.927	0.6778	Normal Distribution

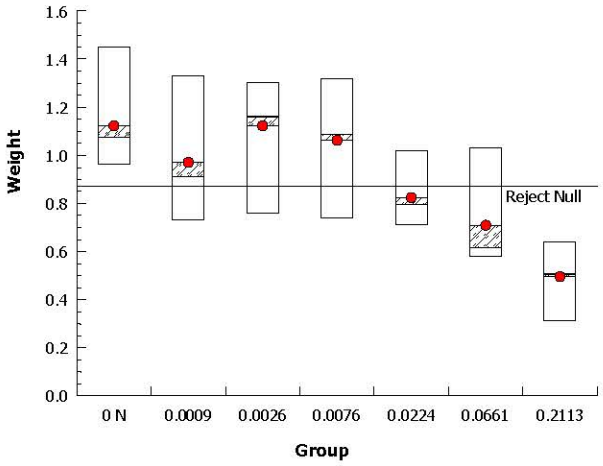
Weight Summary

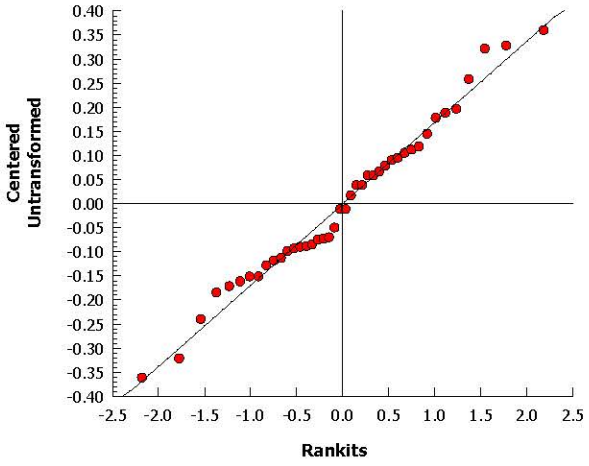
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1.12	0.917	1.33	1.08	0.96	1.45	0.0795	17.4%	0.0%
0.0009		6	0.97	0.755	1.19	0.91	0.73	1.33	0.0838	21.2%	13.5%
0.0026		6	1.12	0.923	1.32	1.16	0.76	1.3	0.0774	16.9%	0.0%
0.0076		6	1.06	0.832	1.29	1.09	0.74	1.32	0.0892	20.6%	5.35%
0.0224		6	0.823	0.699	0.948	0.795	0.71	1.02	0.0484	14.4%	26.6%
0.0661		6	0.708	0.518	0.898	0.615	0.58	1.03	0.0739	25.6%	36.8%
0.2113		6	0.495	0.356	0.634	0.505	0.31	0.64	0.0542	26.8%	55.9%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-0277-9953	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	01-0412-6339	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:32	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	16.9%	0.0076	0.0224	0.01305	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0009	1.45	1.69	0.176	10	>0.05	CDF	Non-Significant Effect
		0.0026	0.727	1.77	0.184	10	>0.05	CDF	Non-Significant Effect
		0.0076	0.677	1.79	0.187	10	>0.05	CDF	Non-Significant Effect
		0.0224*	2.86	1.8	0.188	10	<0.05	CDF	Significant Effect
		0.0661*	3.97	1.81	0.189	10	<0.05	CDF	Significant Effect
		0.2113*	6.01	1.82	0.189	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	2.015681	0.3359468	6	10.3	<0.0001	Significant Effect
Error	1.141017	0.03260048	35			
Total	3.156698		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	2.62	16.8	0.8551	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.98	0.927	0.6778	Normal Distribution

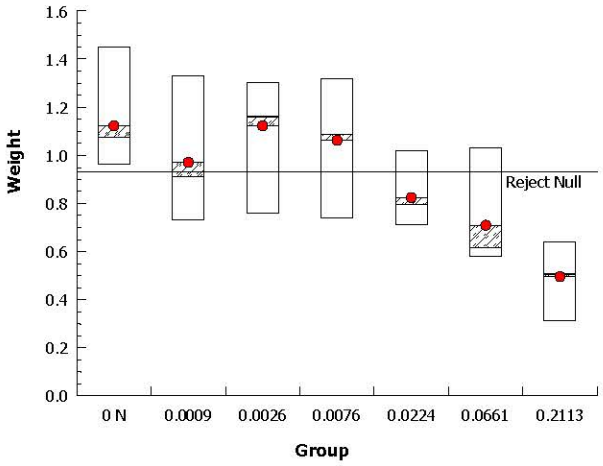
Weight Summary

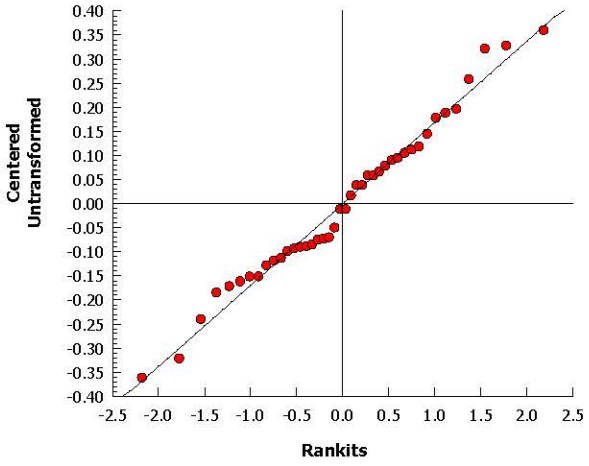
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1.12	0.917	1.33	1.08	0.96	1.45	0.0795	17.4%	0.0%
0.0009		6	0.97	0.755	1.19	0.91	0.73	1.33	0.0838	21.2%	13.5%
0.0026		6	1.12	0.923	1.32	1.16	0.76	1.3	0.0774	16.9%	0.0%
0.0076		6	1.06	0.832	1.29	1.09	0.74	1.32	0.0892	20.6%	5.35%
0.0224		6	0.823	0.699	0.948	0.795	0.71	1.02	0.0484	14.4%	26.6%
0.0661		6	0.708	0.518	0.898	0.615	0.58	1.03	0.0739	25.6%	36.8%
0.2113		6	0.495	0.356	0.634	0.505	0.31	0.64	0.0542	26.8%	55.9%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	01-0412-6339	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:32	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-1377-4813	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Linear Regression (MLE)	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Linear Regression Options

Model Function	Threshold Option	Threshold	Optimized	Pooled	Het Corr	Weighted
Log-Normal [NED=A+B*log(X)]	Control Threshold	0.1	Yes	No	No	Yes

Regression Summary

Iters	LL	AICc	BIC	Mu	Sigma	Adj R2	F Stat	Critical	P-Value	Decision(α:5%)
40	-72.7	152	157	0.844	1.43	0.0216	0.274	2.64	0.8930	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
EC5	0.0305	N/A	N/A
EC10	0.101	N/A	N/A
EC25	0.752	N/A	N/A
EC50	6.98	N/A	N/A

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
Threshold	0.0751	0.0363	0.00405	0.146	2.07	0.0450	Significant Parameter
Slope	0.697	0.738	-0.749	2.14	0.945	0.3507	Non-Significant Parameter
Intercept	-0.588	0.851	-2.26	1.08	-0.692	0.4933	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	3.054435	3.054435	1	2.91	0.0961	Non-Significant
Lack of Fit	1.243187	0.310797	4	0.274	0.8929	Non-Significant
Pure Error	39.73463	1.135275	35			
Residual	40.97782	1.050713	39			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	41	54.6	0.3838	Non-Significant Heterogenity
	Likelihood Ratio GOF	43.4	54.6	0.2881	Non-Significant Heterogenity
Variances	Mod Levene Equality of Variance	0.62	2.37	0.7131	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.829	0.947	<0.0001	Non-normal Distribution
	Anderson-Darling A2 Normality	3.02	2.49	<0.0001	Non-normal Distribution

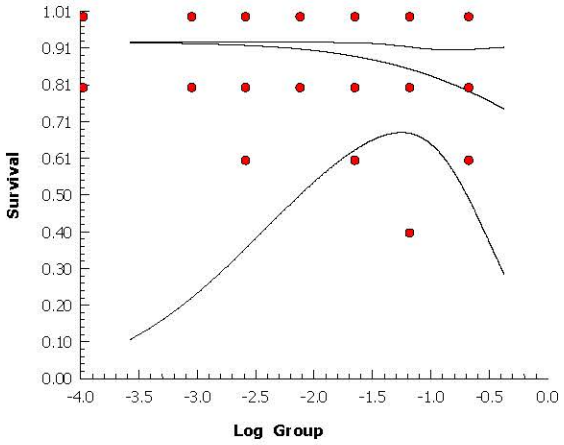
Survival Summary

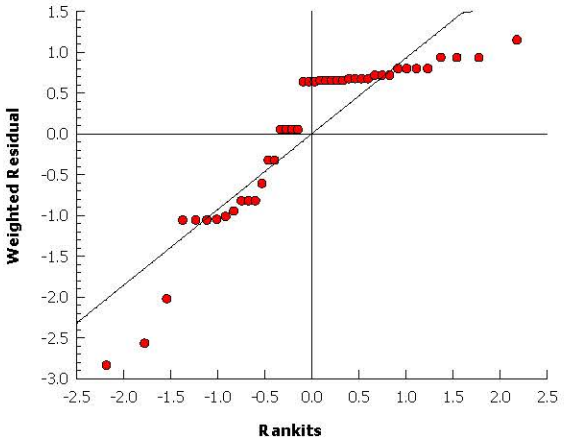
			Calculated Variate(A/B)								
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	6	0.9	0.8	1	0.0447	0.11	12.2%	0.0%	27	30
0.0009		6	0.967	0.8	1	0.0333	0.0816	8.45%	-7.41%	29	30
0.0026		6	0.9	0.6	1	0.0683	0.167	18.6%	0.0%	27	30
0.0076		6	0.9	0.8	1	0.0447	0.11	12.2%	0.0%	27	30
0.0224		6	0.9	0.6	1	0.0683	0.167	18.6%	0.0%	27	30
0.0661		6	0.833	0.4	1	0.0955	0.234	28.1%	7.41%	25	30
0.2113		6	0.8	0.6	1	0.0516	0.126	15.8%	11.1%	24	30

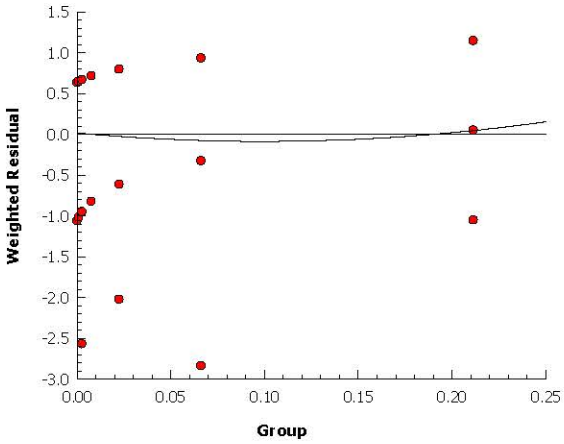
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

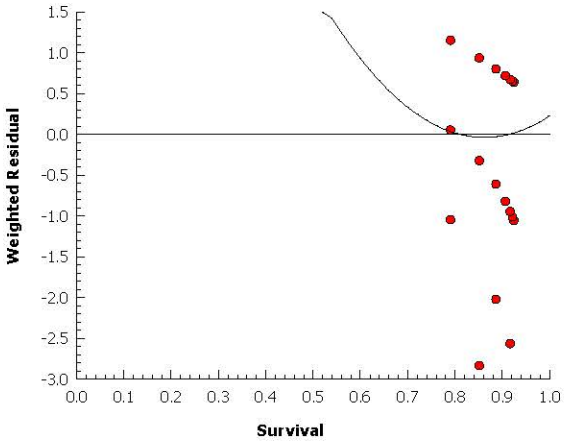
Analysis ID:	16-1377-4813	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Linear Regression (MLE)	**Official Results:**	Yes

Graphics — Log-Normal [NED=A+B*log(X)]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-3186-4184	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
46	2560	-5110	-5100	0.1120	Yes	0.185	2.64	0.9445	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.0322	0.00289	0.127
IC10	0.238	0.0212	1.09
IC25	6.76	N/A	809
IC50	278	N/A	N/A

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	27.7	0.792	26.1	29.2	35	<0.0001	Significant Parameter
C	5.51	4.15	-2.63	13.7	1.33	0.1924	Non-Significant Parameter
D	278	1500	-2660	3220	0.185	0.8538	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	1.165923	1.165923	1	7.17	0.0108	Significant
Lack of Fit	0.131528	0.032882	4	0.185	0.9445	Non-Significant
Pure Error	6.208354	0.177382	35			
Residual	6.339882	0.162561	39			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	6.34	54.6	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	6.35	54.6	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	6.79	12.6	0.3409	Equal Variances
	Mod Levene Equality of Variance	1.07	2.37	0.3999	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.989	0.947	0.9448	Normal Distribution
	Anderson-Darling A2 Normality	0.171	2.49	0.9848	Normal Distribution

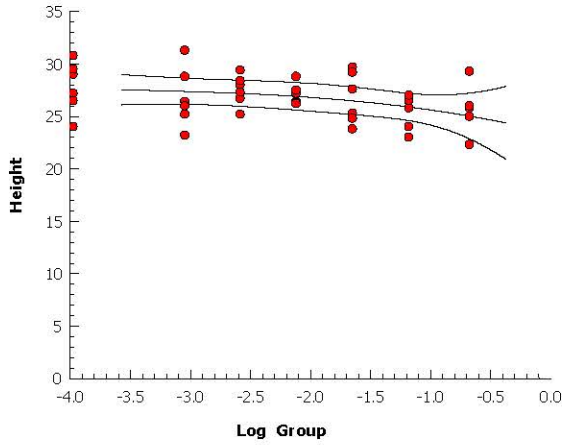
Height Summary

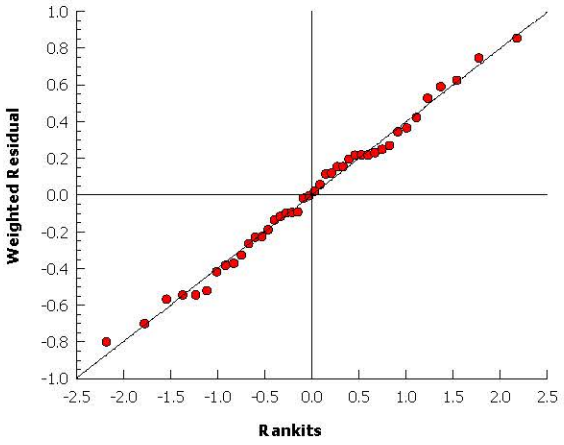
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	27.8	24	30.8	0.997	2.44	8.77%	0.0%
0.0009		6	26.8	23.2	31.3	1.16	2.85	10.6%	3.65%
0.0026		6	27.5	25.2	29.4	0.596	1.46	5.3%	1.2%
0.0076		6	27.1	26.2	28.8	0.408	0.999	3.69%	2.75%
0.0224		6	26.7	23.8	29.7	1	2.45	9.17%	3.95%
0.0661		6	25.5	23	27	0.685	1.68	6.57%	8.2%
0.2113		6	25.1	22.3	29.3	1.07	2.63	10.5%	9.76%

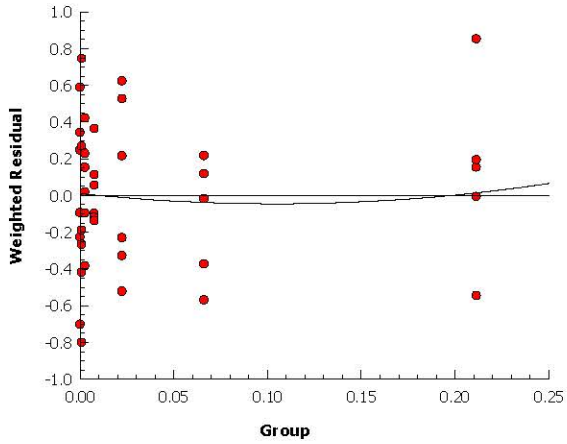
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

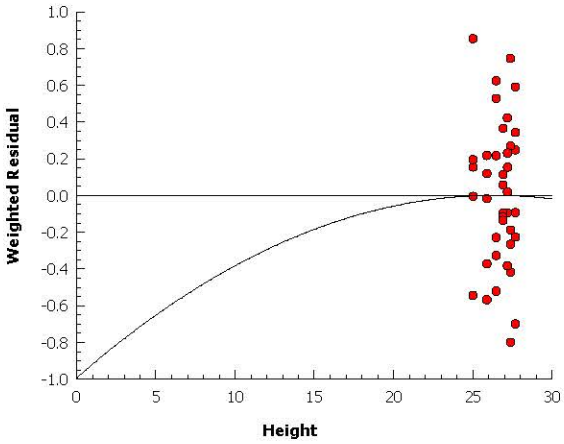
Analysis ID:	19-3186-4184	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	14-3353-9560	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	14-8940-0728	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:04	**Species:**	Daucus carota	**Brine:**	
Duration:	539d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	15-5312-7464	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:04	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
6	-40.6	87.9	92.5	0.5749	Yes	1.05	2.64	0.3960	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.00388	N/A	0.0108
IC10	0.00878	0.00177	0.0195
IC25	0.0343	0.018	0.0589
IC50	0.156	0.0996	0.245

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	1.09	0.0577	0.979	1.21	18.9	<0.0001	Significant Parameter
C	2.25	0.57	1.13	3.36	3.94	0.0003	Significant Parameter
D	0.156	0.0416	0.0747	0.238	3.75	0.0006	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	2.088534	2.088534	1	57.4	<0.0001	Significant
Lack of Fit	0.151847	0.037962	4	1.05	0.3960	Non-Significant
Pure Error	1.266133	0.036175	35			
Residual	1.41798	0.036358	39			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	1.42	54.6	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	1.41	54.6	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	1.59	12.6	0.9536	Equal Variances
	Mod Levene Equality of Variance	0.249	2.37	0.9564	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.957	0.947	0.1119	Normal Distribution
	Anderson-Darling A2 Normality	0.845	2.49	0.0295	Non-normal Distribution

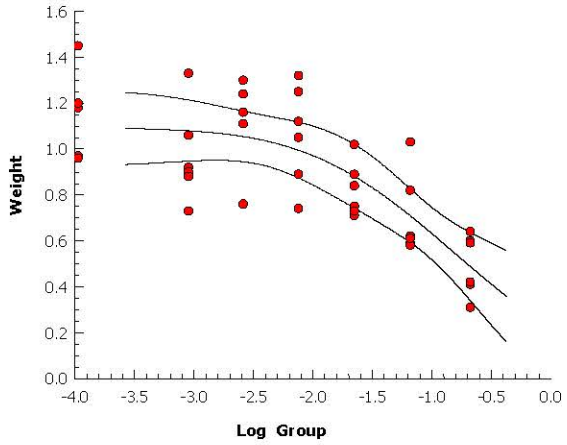
Weight Summary

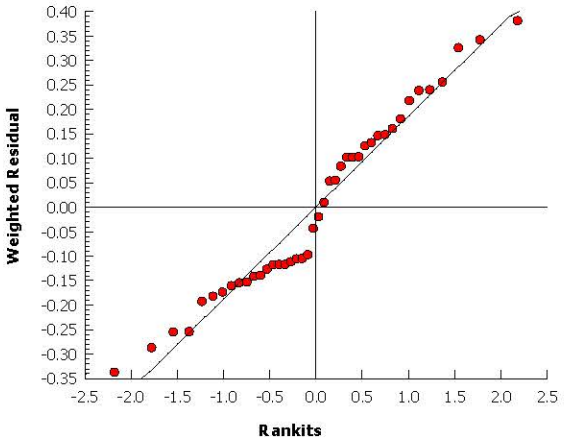
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	1.12	0.96	1.45	0.0795	0.195	17.4%	0.0%
0.0009		6	0.97	0.73	1.33	0.0838	0.205	21.2%	13.5%
0.0026		6	1.12	0.76	1.3	0.0774	0.19	16.9%	0.0%
0.0076		6	1.06	0.74	1.32	0.0892	0.218	20.6%	5.35%
0.0224		6	0.823	0.71	1.02	0.0484	0.119	14.4%	26.6%
0.0661		6	0.708	0.58	1.03	0.0739	0.181	25.6%	36.8%
0.2113		6	0.495	0.31	0.64	0.0542	0.133	26.8%	55.9%

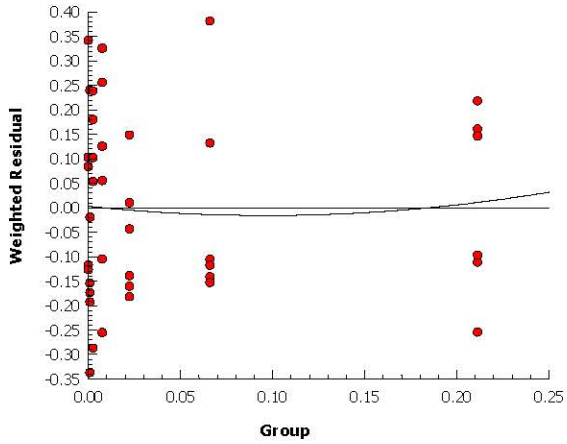
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

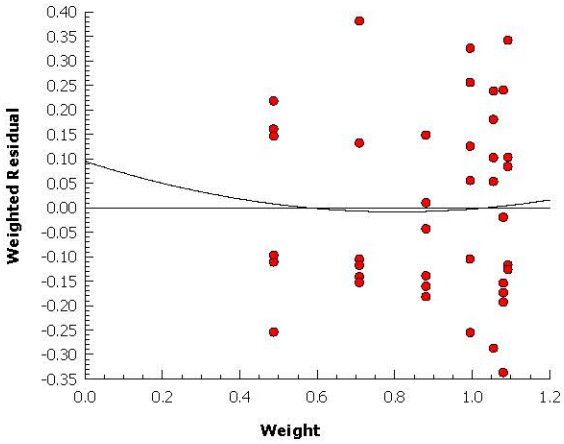
Analysis ID:	14-3353-9560	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:31	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
11-2661-6892	Height	0.0661	0.2113	0.1182	6.29%		Dunnett Multiple Comparison Test
05-0439-6462	Height	0.0661	0.2113	0.1182	4.91%		Williams Multiple Comparison Test
20-0260-6502	Survival	1.9172	>1.9172	NA	NA		Jonckheere-Terpstra Step-Down Test
15-4211-7877	Survival	1.9172	>1.9172	NA	NA		Mann-Whitney U Two-Sample Test
12-9817-5246	Weight	0.0661	0.2113	0.1182	16.4%		Dunnett Multiple Comparison Test
11-6004-8602	Weight	0.0224	0.0661	0.03848	12.8%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
02-9739-2652	Height	IC5	0.0586	0.0183	0.126		Nonlinear Regression
		IC10	0.232	0.127	0.382		
		IC25	2.31	1.38	3.69		
		IC50	29.6	7.43	118		
15-5480-1581	Weight	IC5	0.027	N/A	0.0774		Nonlinear Regression
		IC10	0.0714	0.0218	0.15		
		IC25	0.364	0.221	0.567		
		IC50	2.22	1.33	3.7		

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	64.9	62.3	67.6	62.6	69.4	1.04	2.54	3.92%	0.0%
0	Negative Control	6	68	64.6	71.4	63.2	72.2	1.34	3.27	4.81%	-4.72%
0.0224		6	71.3	67.8	74.8	65.8	74.2	1.37	3.36	4.72%	-9.8%
0.0661		6	66.4	64.3	68.6	63.4	69.4	0.835	2.05	3.08%	-2.31%
0.2113		6	60	57.2	62.8	57.2	64.8	1.1	2.7	4.51%	7.6%
0.6241		6	59	54.5	63.5	52.4	64.4	1.75	4.28	7.26%	9.19%
1.9172		6	54	51	57.1	50.2	58.2	1.19	2.92	5.41%	16.8%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0661		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2113		6	1	1	1	1	1	0	0	0.0%	0.0%
0.6241		6	1	1	1	1	1	0	0	0.0%	0.0%
1.9172		6	1	1	1	1	1	0	0	0.0%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	5.94	5.14	6.74	4.73	6.61	0.311	0.761	12.8%	0.0%
0	Negative Control	6	6.86	5.97	7.76	5.75	8.21	0.349	0.854	12.4%	-15.5%
0.0224		6	6.59	5.57	7.61	4.93	7.53	0.396	0.97	14.7%	-10.9%
0.0661		6	5.82	4.84	6.8	4.45	6.96	0.38	0.931	16.0%	2.02%
0.2113		6	5.52	4.5	6.54	4.19	6.84	0.396	0.971	17.6%	7.01%
0.6241		6	4.88	4.18	5.58	3.88	5.62	0.273	0.669	13.7%	17.8%
1.9172		6	3.43	2.89	3.96	2.72	4.05	0.209	0.511	14.9%	42.3%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	62.6	69.4	64.8	63.2	63.4	66.2
0	Negative Control	72.2	71	68.2	67.2	63.2	66.2
0.0224		74.2	71.6	73.8	68.8	65.8	73.6
0.0661		67.2	69.4	65	66.8	66.8	63.4
0.2113		60.8	57.2	59	60.2	58	64.8
0.6241		52.4	60.4	64.4	62.2	57.6	56.8
1.9172		55.8	58.2	50.2	51.4	53.8	54.8

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.0224		1	1	1	1	1	1
0.0661		1	1	1	1	1	1
0.2113		1	1	1	1	1	1
0.6241		1	1	1	1	1	1
1.9172		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	5.95	6.57	6.43	6.61	4.73	5.35
0	Negative Control	6.8	6.92	7.28	8.21	5.75	6.22
0.0224		7.53	7.31	6.8	5.99	4.93	6.97
0.0661		5.16	6.6	4.45	6.11	6.96	5.64
0.2113		5.74	4.19	5.46	6.84	4.7	6.21
0.6241		3.88	4.61	4.56	5.62	5.58	5.04
1.9172		4.05	3.36	2.72	2.96	3.75	3.73

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	11-2661-6892	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	6.29%	0.0661	0.2113	0.1182	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0224	-1.8	2.34	4.28	10	0.9987	CDF	Non-Significant Effect
		0.0661	0.855	2.34	4.28	10	0.4847	CDF	Non-Significant Effect
		0.2113*	4.37	2.34	4.28	10	0.0003	CDF	Significant Effect
		0.6241*	4.93	2.34	4.28	10	<0.0001	CDF	Significant Effect
		1.9172*	7.62	2.34	4.28	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1267.542	253.5084	5	25.2	<0.0001	Significant Effect
Error	302.08	10.06933	30			
Total	1569.622		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	2.71	15.1	0.7450	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.985	0.917	0.8987	Normal Distribution

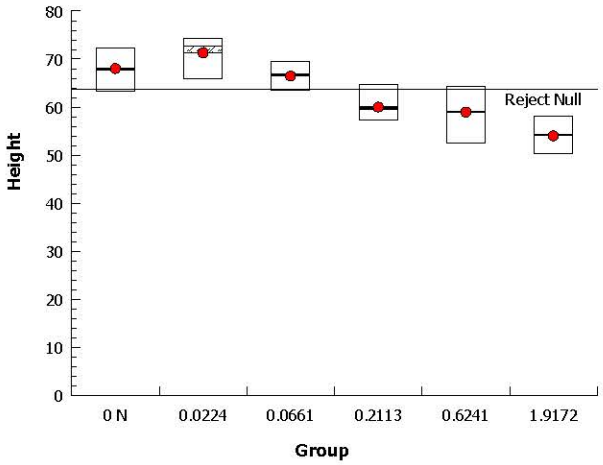
Height Summary

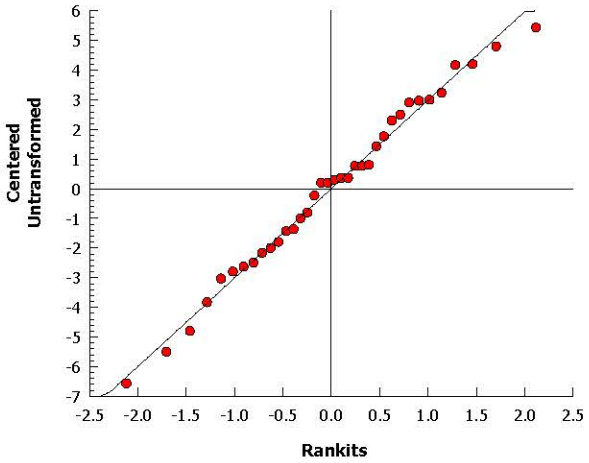
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	68	64.6	71.4	67.7	63.2	72.2	1.34	4.81%	0.0%
0.0224		6	71.3	67.8	74.8	72.6	65.8	74.2	1.37	4.72%	-4.85%
0.0661		6	66.4	64.3	68.6	66.8	63.4	69.4	0.835	3.08%	2.3%
0.2113		6	60	57.2	62.8	59.6	57.2	64.8	1.1	4.51%	11.8%
0.6241		6	59	54.5	63.5	59	52.4	64.4	1.75	7.26%	13.3%
1.9172		6	54	51	57.1	54.3	50.2	58.2	1.19	5.41%	20.5%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	11-2661-6892	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	05-0439-6462	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	4.91%	0.0661	0.2113	0.1182	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0224	-1.8	1.7	3.11	10	>0.05	CDF	Non-Significant Effect
		0.0661	0.855	1.78	3.25	10	>0.05	CDF	Non-Significant Effect
		0.2113*	4.37	1.8	3.3	10	<0.05	CDF	Significant Effect
		0.6241*	4.93	1.81	3.32	10	<0.05	CDF	Significant Effect
		1.9172*	7.62	1.82	3.34	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1267.542	253.5084	5	25.2	<0.0001	Significant Effect
Error	302.08	10.06933	30			
Total	1569.622		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	2.71	15.1	0.7450	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.985	0.917	0.8987	Normal Distribution

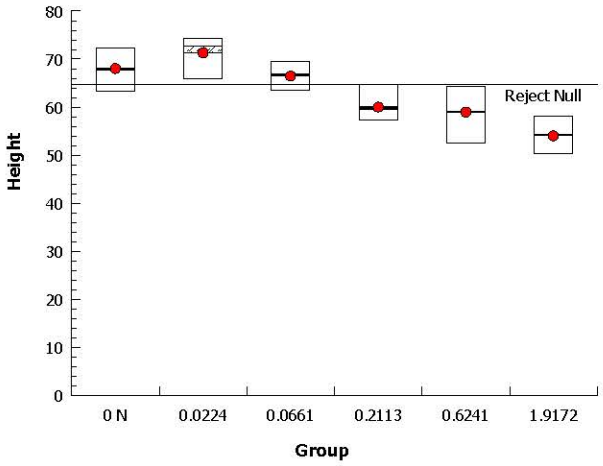
Height Summary

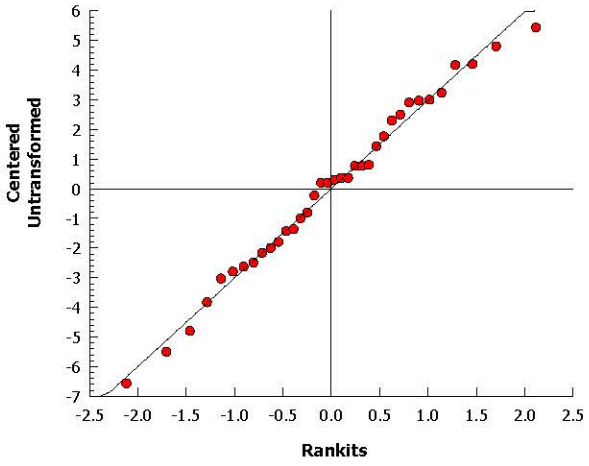
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	68	64.6	71.4	67.7	63.2	72.2	1.34	4.81%	0.0%
0.0224		6	71.3	67.8	74.8	72.6	65.8	74.2	1.37	4.72%	-4.85%
0.0661		6	66.4	64.3	68.6	66.8	63.4	69.4	0.835	3.08%	2.3%
0.2113		6	60	57.2	62.8	59.6	57.2	64.8	1.1	4.51%	11.8%
0.6241		6	59	54.5	63.5	59	52.4	64.4	1.75	7.26%	13.3%
1.9172		6	54	51	57.1	54.3	50.2	58.2	1.19	5.41%	20.5%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	05-0439-6462	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-4211-7877	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	1.9172	>1.9172	NA	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0224	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0661	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.2113	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.6241	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		1.9172	18	NA	1	10	1.0000	Exact	Non-Significant Effect

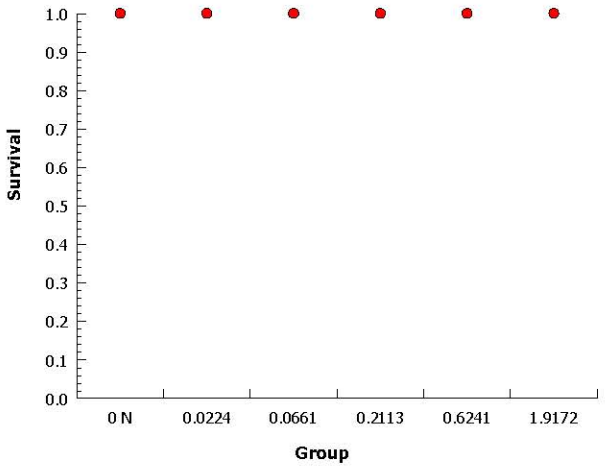
ANOVA Table

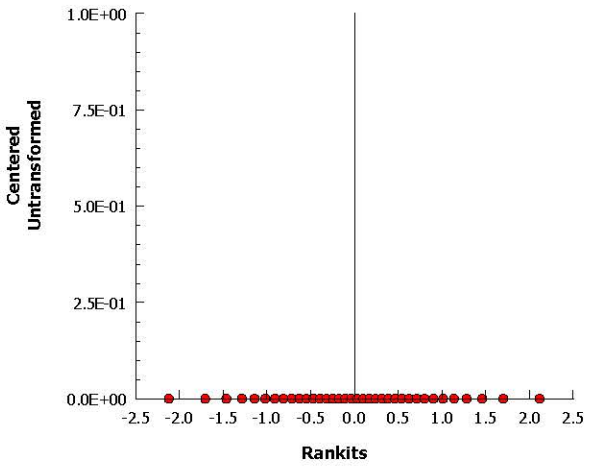
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	5	65500	<0.0001	Significant Effect
Error	0	0	30			
Total	0		35			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0661		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2113		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6241		6	1	1	1	1	1	1	0	0.0%	0.0%
1.9172		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-0260-6502	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	1.9172	>1.9172	NA	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0224	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0661	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.2113	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.6241	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		1.9172	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect

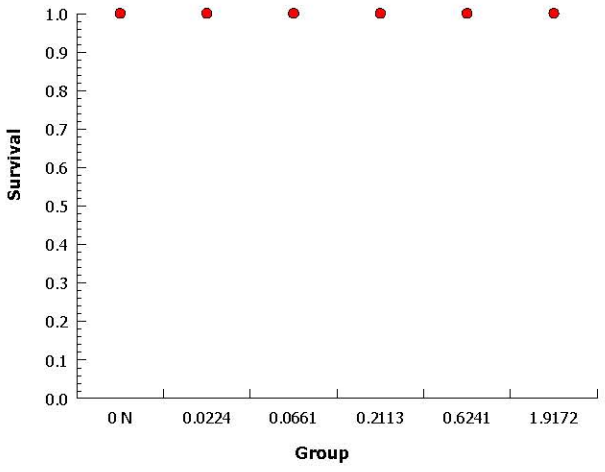
ANOVA Table

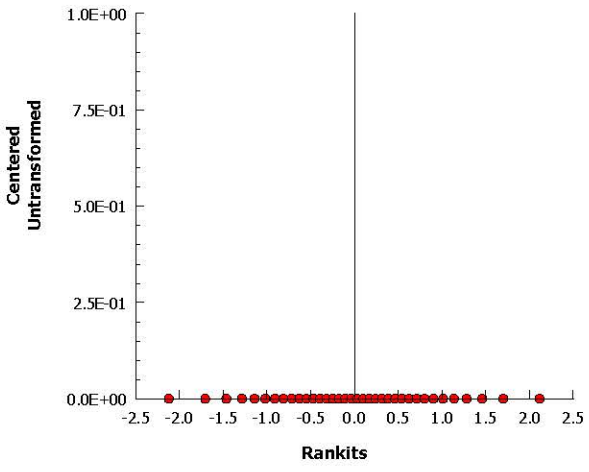
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	5	65500	<0.0001	Significant Effect
Error	0	0	30			
Total	0		35			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0661		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2113		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6241		6	1	1	1	1	1	1	0	0.0%	0.0%
1.9172		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-9817-5246	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	16.4%	0.0661	0.2113	0.1182	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0224	0.57	2.34	1.13	10	0.6156	CDF	Non-Significant Effect
		0.0661	2.16	2.34	1.13	10	0.0707	CDF	Non-Significant Effect
		0.2113*	2.78	2.34	1.13	10	0.0190	CDF	Significant Effect
		0.6241*	4.11	2.34	1.13	10	0.0006	CDF	Significant Effect
		1.9172*	7.12	2.34	1.13	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	46.91036	9.382071	5	13.4	<0.0001	Significant Effect
Error	20.94772	0.6982573	30			
Total	67.85808		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	2.64	15.1	0.7559	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.977	0.917	0.6535	Normal Distribution

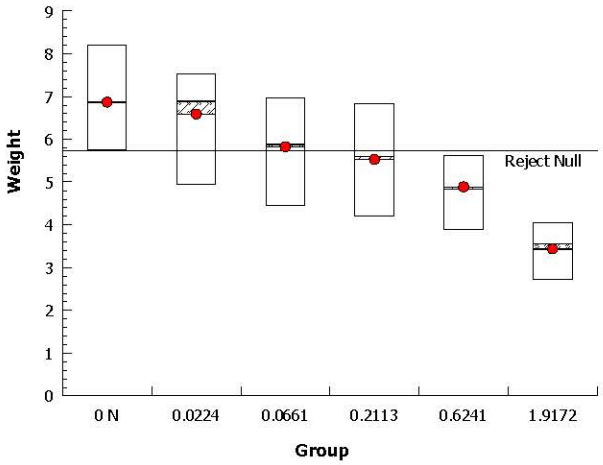
Weight Summary

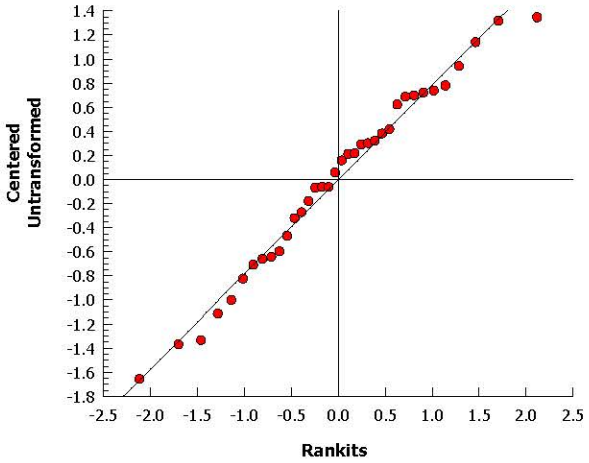
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	6.86	5.97	7.76	6.86	5.75	8.21	0.349	12.4%	0.0%
0.0224		6	6.59	5.57	7.61	6.89	4.93	7.53	0.396	14.7%	4.01%
0.0661		6	5.82	4.84	6.8	5.88	4.45	6.96	0.38	16.0%	15.2%
0.2113		6	5.52	4.5	6.54	5.6	4.19	6.84	0.396	17.6%	19.5%
0.6241		6	4.88	4.18	5.58	4.82	3.88	5.62	0.273	13.7%	28.9%
1.9172		6	3.43	2.89	3.96	3.55	2.72	4.05	0.209	14.9%	50.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-9817-5246	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	11-6004-8602	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	12.8%	0.0224	0.0661	0.03848	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0224	0.57	1.7	0.819	10	>0.05	CDF	Non-Significant Effect
		0.0661*	2.16	1.78	0.857	10	<0.05	CDF	Significant Effect
		0.2113*	2.78	1.8	0.869	10	<0.05	CDF	Significant Effect
		0.6241*	4.11	1.81	0.875	10	<0.05	CDF	Significant Effect
		1.9172*	7.12	1.82	0.879	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	46.91036	9.382071	5	13.4	<0.0001	Significant Effect
Error	20.94772	0.6982573	30			
Total	67.85808		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	2.64	15.1	0.7559	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.977	0.917	0.6535	Normal Distribution

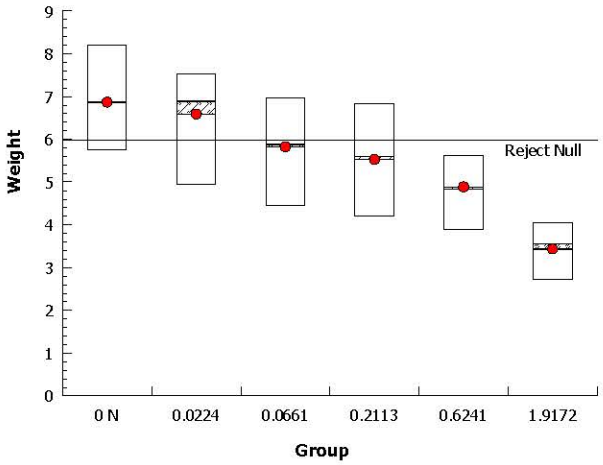
Weight Summary

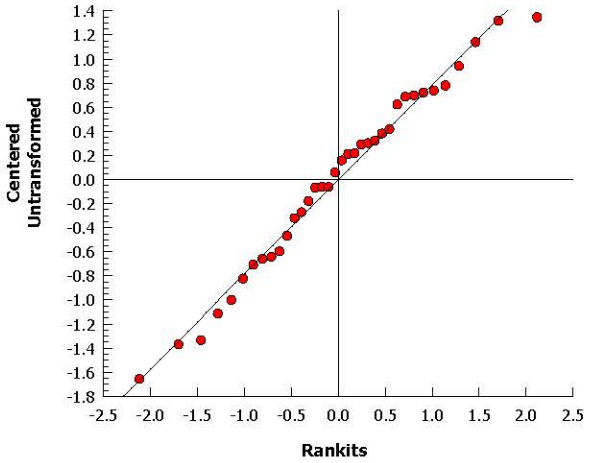
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	6.86	5.97	7.76	6.86	5.75	8.21	0.349	12.4%	0.0%
0.0224		6	6.59	5.57	7.61	6.89	4.93	7.53	0.396	14.7%	4.01%
0.0661		6	5.82	4.84	6.8	5.88	4.45	6.96	0.38	16.0%	15.2%
0.2113		6	5.52	4.5	6.54	5.6	4.19	6.84	0.396	17.6%	19.5%
0.6241		6	4.88	4.18	5.58	4.82	3.88	5.62	0.273	13.7%	28.9%
1.9172		6	3.43	2.89	3.96	3.55	2.72	4.05	0.209	14.9%	50.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	11-6004-8602	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	02-9739-2652	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
23	7160	-14300	-14300	0.6928	Yes	4.85	2.92	0.0072	Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.0586	0.0183	0.126
IC10	0.232	0.127	0.382
IC25	2.31	1.38	3.69
IC50	29.6	7.43	118

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	69.7	1.48	66.8	72.6	47.1	<0.0001	Significant Parameter
C	3.79	0.825	2.17	5.4	4.59	<0.0001	Significant Parameter
D	29.6	19.2	-8.03	67.3	1.54	0.1326	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	17.66352	17.66352	1	80.9	<0.0001	Significant
Lack of Fit	2.350939	0.783646	3	4.85	0.0072	Significant
Pure Error	4.851939	0.161731	30			
Residual	7.202878	0.218269	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	7.2	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	7.21	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	3.01	11.1	0.6983	Equal Variances
	Mod Levene Equality of Variance	0.838	2.53	0.5331	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.968	0.94	0.3763	Normal Distribution
	Anderson-Darling A2 Normality	0.362	2.49	0.4487	Normal Distribution

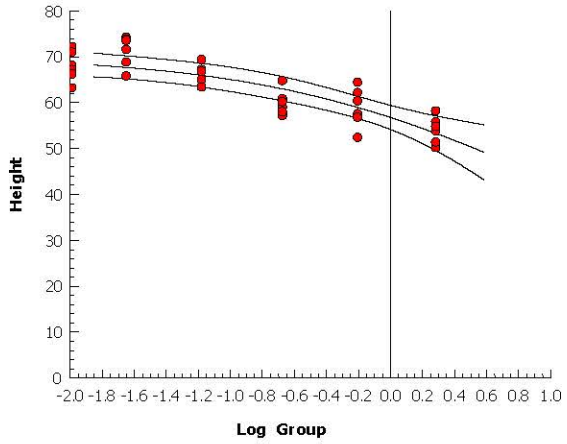
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

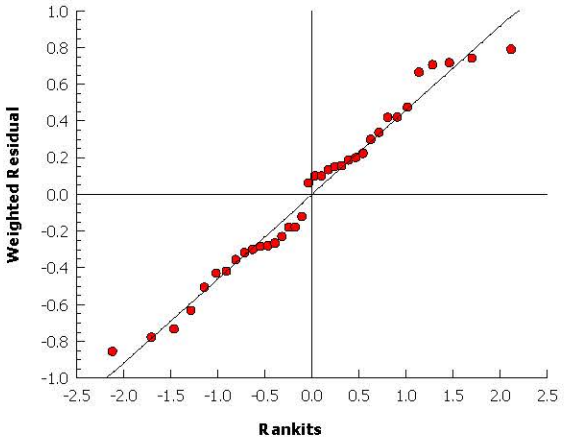
Analysis ID:	02-9739-2652	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

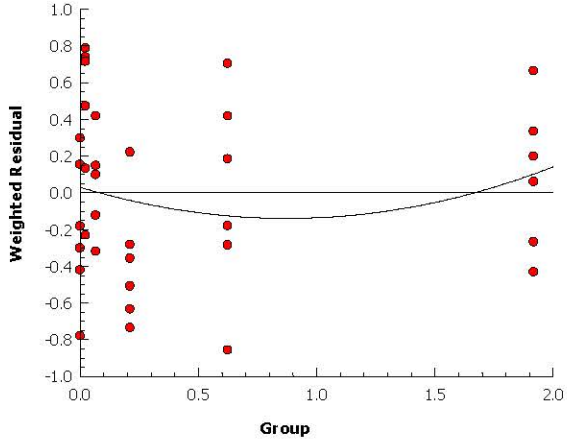
Height Summary

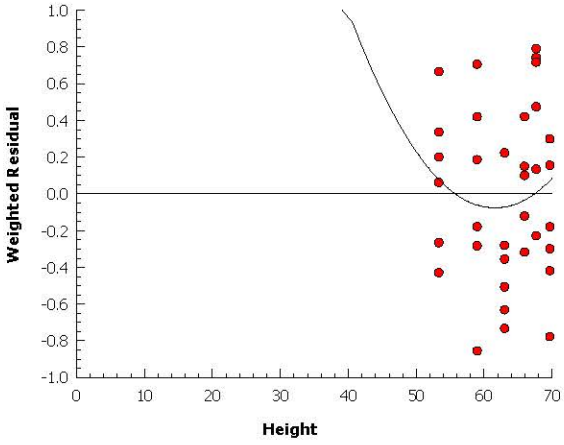
			Calculated Variate						
Group	**Control Type**	**Count**	**Mean**	**Min**	**Max**	**Std Err**	**Std Dev**	**CV%**	**%Effect**
0	Negative Control	6	68	63.2	72.2	1.34	3.27	4.81%	0.0%
0.0224		6	71.3	65.8	74.2	1.37	3.36	4.72%	-4.85%
0.0661		6	66.4	63.4	69.4	0.835	2.05	3.08%	2.3%
0.2113		6	60	57.2	64.8	1.1	2.7	4.51%	11.8%
0.6241		6	59	52.4	64.4	1.75	4.28	7.26%	13.3%
1.9172		6	54	50.2	58.2	1.19	2.92	5.41%	20.5%

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-5480-1581	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	03-8649-4608	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	L. Eisenhauer
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:		**Species:**	Zea mays	**Brine:**	
Duration:	NA	**Source:**	New Hope Seed Co.	**Age:**	
Sample ID:	15-3082-9703	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:		**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Batch Note: Dicamba (BAPMA formulation, 47.86%), 100094
Sample Note: Dicamba (BAPMA formulation, 47.86%), 100094

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
8	145	-283	-279	0.6640	Yes	0.578	2.92	0.6340	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.027	N/A	0.0774
IC10	0.0714	0.0218	0.15
IC25	0.364	0.221	0.567
IC50	2.22	1.33	3.7

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	6.79	0.327	6.15	7.43	20.8	<0.0001	Significant Parameter
C	2.68	0.608	1.49	3.87	4.41	0.0001	Significant Parameter
D	2.22	0.618	1.01	3.43	3.59	0.0011	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	8.402064	8.402064	1	71.2	<0.0001	Significant
Lack of Fit	0.212909	0.07097	3	0.578	0.6340	Non-Significant
Pure Error	3.683728	0.122791	30			
Residual	3.896636	0.11808	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	3.9	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	3.97	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	1.08	11.1	0.9561	Equal Variances
	Mod Levene Equality of Variance	0.199	2.53	0.9605	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.972	0.94	0.4937	Normal Distribution
	Anderson-Darling A2 Normality	0.337	2.49	0.5083	Normal Distribution

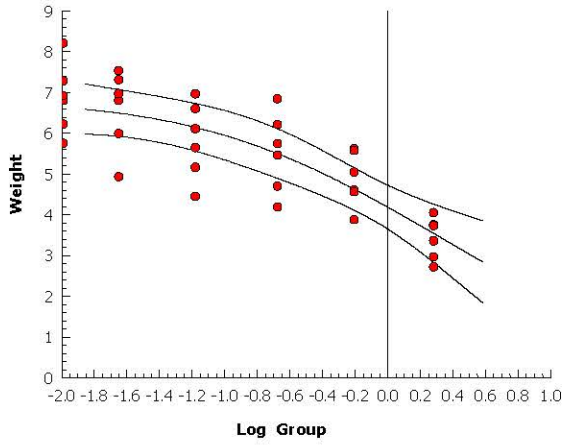
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

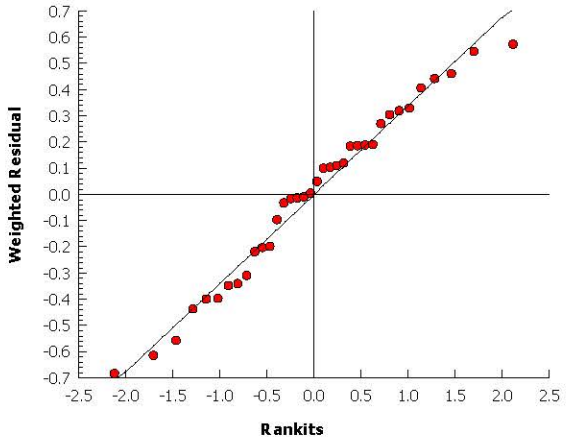
Analysis ID:	15-5480-1581	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:35	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

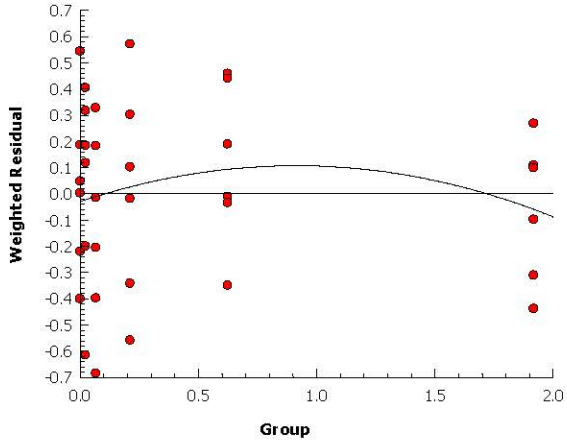
Weight Summary

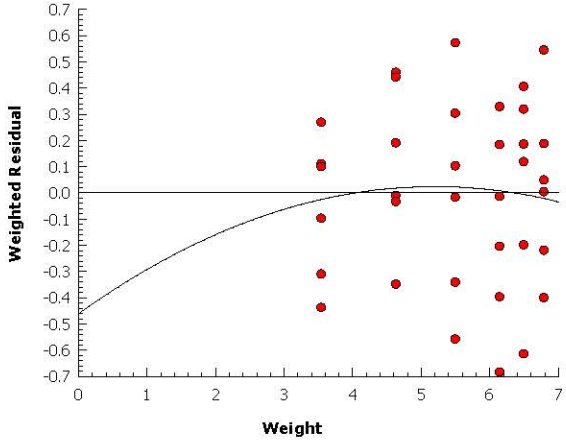
			Calculated Variate						
Group	**Control Type**	**Count**	**Mean**	**Min**	**Max**	**Std Err**	**Std Dev**	**CV%**	**%Effect**
0	Negative Control	6	6.86	5.75	8.21	0.349	0.854	12.4%	0.0%
0.0224		6	6.59	4.93	7.53	0.396	0.97	14.7%	4.01%
0.0661		6	5.82	4.45	6.96	0.38	0.931	16.0%	15.2%
0.2113		6	5.52	4.19	6.84	0.396	0.971	17.6%	19.5%
0.6241		6	4.88	3.88	5.62	0.273	0.669	13.7%	28.9%
1.9172		6	3.43	2.72	4.05	0.209	0.511	14.9%	50.0%

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	

Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
04-4797-7677	Height	0.024	>0.024	NA	13.8%		Dunnett Multiple Comparison Test
16-0439-7637	Height	0.024	>0.024	NA	10.8%		Williams Multiple Comparison Test
09-8966-7680	Survival	0.024	>0.024	NA	NA		Jonckheere-Terpstra Step-Down Test
11-0500-6407	Survival	0.024	>0.024	NA	NA		Jonckheere-Terpstra Step-Down Test
18-0702-8469	Survival	0.024	>0.024	NA	7.15%		Mann-Whitney U Two-Sample Test
03-0116-9781	Weight	0.0082	0.024	0.01403	15.9%		Dunnett Multiple Comparison Test
02-7016-6216	Weight	0.0082	0.024	0.01403	12.4%		Williams Multiple Comparison Test
15-3936-5593	Weight	0.0082	0.024	0.01403	12.4%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
16-7684-1790	Weight	IC5	0.00463	N/A	0.00781		Nonlinear Regression
		IC10	0.0074	0.00327	0.0114		
		IC25	0.0162	0.0122	0.0207		
		IC50	0.0388	0.0249	0.0606		

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	21.2	18.7	23.7	18	24	0.976	2.39	11.3%	0.0%
0	Negative Control	6	19	17.5	20.5	17	20.6	0.583	1.43	7.5%	10.2%
0.0003		6	19.8	17.7	21.9	18.4	23.6	0.816	2	10.1%	6.6%
0.0027		6	20.4	17.4	23.4	17.2	25	1.17	2.86	14.0%	3.77%
0.0033		6	21.4	19.3	23.4	19.2	24.8	0.809	1.98	9.27%	-0.79%
0.0082		6	22	20.2	23.9	20.4	25.2	0.718	1.76	7.98%	-3.93%
0.024		6	19.4	18.1	20.8	17.6	21.2	0.525	1.29	6.62%	8.33%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0033		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0082		6	0.9	0.724	1	0.6	1	0.0683	0.167	18.6%	10.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	4.16	3.68	4.65	3.63	4.75	0.188	0.46	11.1%	0.0%
0	Negative Control	6	3.73	3.4	4.06	3.3	4.15	0.129	0.317	8.5%	10.4%
0.0003		6	4.09	3.61	4.57	3.53	4.69	0.187	0.458	11.2%	1.84%
0.0027		6	3.64	3.07	4.22	3.03	4.4	0.225	0.551	15.1%	12.5%
0.0033		6	3.78	3.22	4.33	2.86	4.32	0.216	0.529	14.0%	9.29%
0.0082		6	3.48	2.97	3.98	2.94	4.2	0.198	0.484	13.9%	16.5%
0.024		6	2.48	2.27	2.69	2.33	2.87	0.0814	0.199	8.03%	40.4%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	18	19.6	19.8	23.2	22.6	24
0	Negative Control	17	18	20.6	19.2	20.6	18.8
0.0003		18.4	18.6	18.4	20.2	23.6	19.6
0.0027		21.2	20	17.6	25	17.2	21.4
0.0033		19.2	20.2	20.6	21	24.8	22.4
0.0082		21.8	21	20.4	22.8	21	25.2
0.024		20.2	19.4	19.8	21.2	17.6	18.4

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.0003		1	1	1	1	1	1
0.0027		1	1	1	1	1	1
0.0033		1	1	1	1	1	1
0.0082		1	1	1	0.8	0.6	1
0.024		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	3.86	4.09	3.63	4.7	4.75	3.95
0	Negative Control	3.74	3.54	4.03	4.15	3.3	3.61
0.0003		3.53	3.88	3.68	4.31	4.43	4.69
0.0027		3.26	3.48	3.45	4.24	3.03	4.4
0.0033		4.24	3.64	3.92	2.86	3.68	4.32
0.0082		3.75	3.67	3.02	2.94	4.2	3.28
0.024		2.33	2.4	2.87	2.52	2.39	2.39

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	04-4797-7677	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	13.8%	0.024	>0.024	NA	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0003	-0.679	2.34	2.64	10	0.9614	CDF	Non-Significant Effect
		0.0027	-1.21	2.34	2.64	10	0.9912	CDF	Non-Significant Effect
		0.0033	-2.07	2.34	2.64	10	0.9995	CDF	Non-Significant Effect
		0.0082	-2.66	2.34	2.64	10	0.9999	CDF	Non-Significant Effect
		0.024	-0.354	2.34	2.64	10	0.9172	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	40.47555	8.09511	5	2.12	0.0905	Non-Significant Effect
Error	114.6133	3.820444	30			
Total	155.0889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	3.88	15.1	0.5661	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.955	0.917	0.1486	Normal Distribution

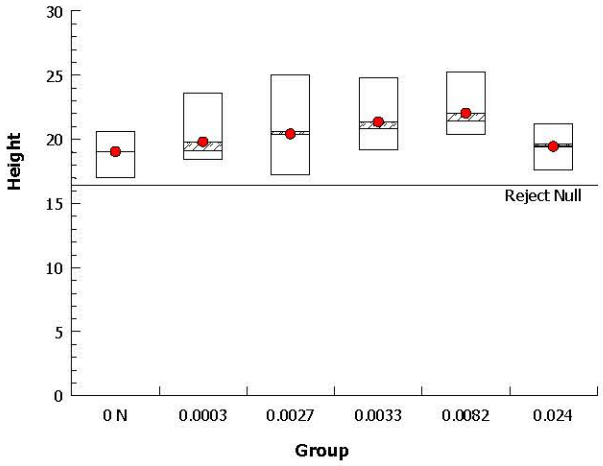
Height Summary

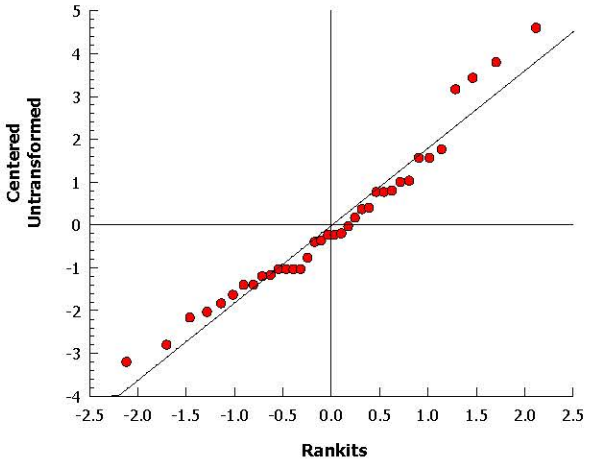
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	19	17.5	20.5	19	17	20.6	0.583	7.5%	0.0%
0.0003		6	19.8	17.7	21.9	19.1	18.4	23.6	0.816	10.1%	-4.03%
0.0027		6	20.4	17.4	23.4	20.6	17.2	25	1.17	14.0%	-7.18%
0.0033		6	21.4	19.3	23.4	20.8	19.2	24.8	0.809	9.27%	-12.3%
0.0082		6	22	20.2	23.9	21.4	20.4	25.2	0.718	7.98%	-15.8%
0.024		6	19.4	18.1	20.8	19.6	17.6	21.2	0.525	6.62%	-2.1%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	04-4797-7677	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-0439-7637	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	10.8%	0.024	>0.024	NA	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0003	-0.679	1.7	1.92	10	>0.05	CDF	Non-Significant Effect
		0.0027	-0.945	1.78	2	10	>0.05	CDF	Non-Significant Effect
		0.0033	-1.32	1.8	2.03	10	>0.05	CDF	Non-Significant Effect
		0.0082	-1.65	1.81	2.05	10	>0.05	CDF	Non-Significant Effect
		0.024	-0.354	1.82	2.05	10	>0.05	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	40.47555	8.09511	5	2.12	0.0905	Non-Significant Effect
Error	114.6133	3.820444	30			
Total	155.0889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	3.88	15.1	0.5661	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.955	0.917	0.1486	Normal Distribution

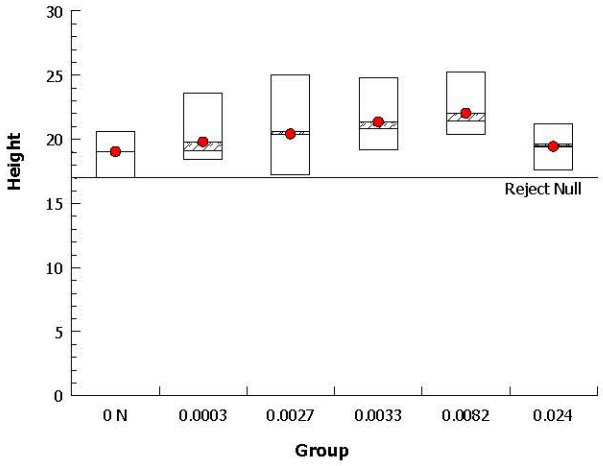
Height Summary

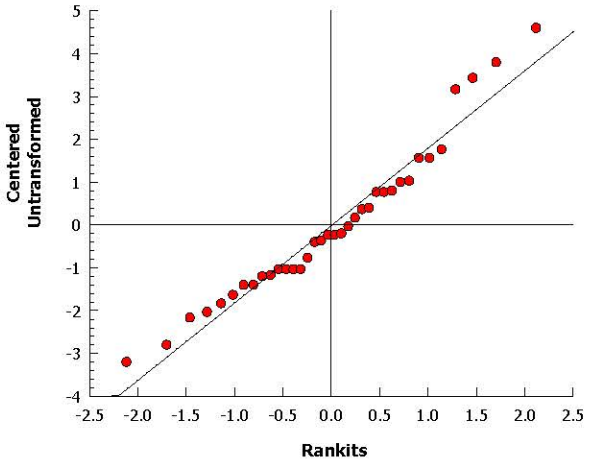
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	19	17.5	20.5	19	17	20.6	0.583	7.5%	0.0%
0.0003		6	19.8	17.7	21.9	19.1	18.4	23.6	0.816	10.1%	-4.03%
0.0027		6	20.4	17.4	23.4	20.6	17.2	25	1.17	14.0%	-7.18%
0.0033		6	21.4	19.3	23.4	20.8	19.2	24.8	0.809	9.27%	-12.3%
0.0082		6	22	20.2	23.9	21.4	20.4	25.2	0.718	7.98%	-15.8%
0.024		6	19.4	18.1	20.8	19.6	17.6	21.2	0.525	6.62%	-2.1%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-0439-7637	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	18-0702-8469	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	7.15%	0.024	>0.024	NA	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0003	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0027	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0033	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0082	24	NA	1	10	0.2273	Exact	Non-Significant Effect
		0.024	18	NA	1	10	1.0000	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.05	0.01	5	2.14	0.0874	Non-Significant Effect
Error	0.14	0.004666667	30			
Total	0.19		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	2.14	3.7	0.0874	Equal Variances
Variances	Levene Equality of Variance	16	3.7	<0.0001	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.485	0.917	<0.0001	Non-normal Distribution

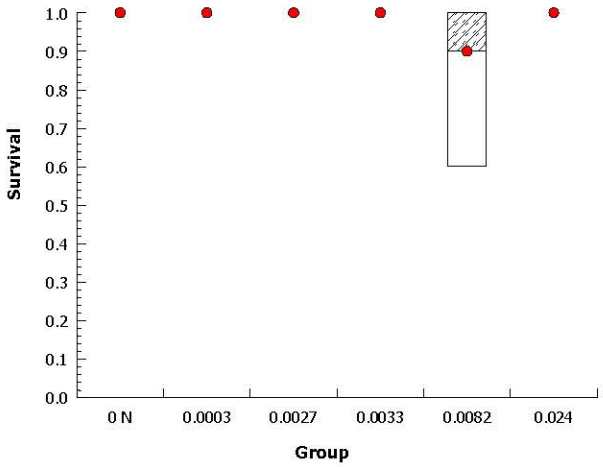
Survival Summary

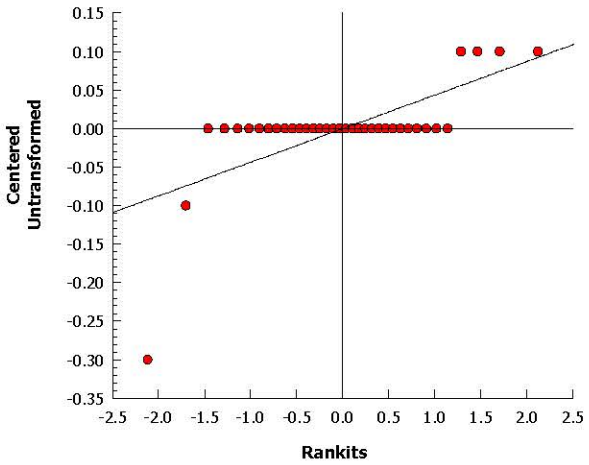
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0033		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	10.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	18-0702-8469	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	11-0500-6407	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.024	>0.024	NA	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0003	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0027	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0033	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0082	2.29	1.64	1	-2	0.0824	Asymp	Non-Significant Effect
		0.024	1.39	1.64	1	-2	0.0824	Asymp	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.05	0.01	5	2.14	0.0874	Non-Significant Effect
Error	0.14	0.004666667	30			
Total	0.19		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	2.14	3.7	0.0874	Equal Variances
Variances	Levene Equality of Variance	16	3.7	<0.0001	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.485	0.917	<0.0001	Non-normal Distribution

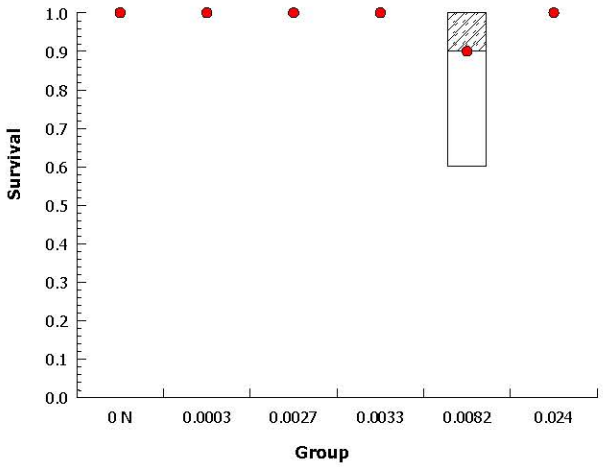
Survival Summary

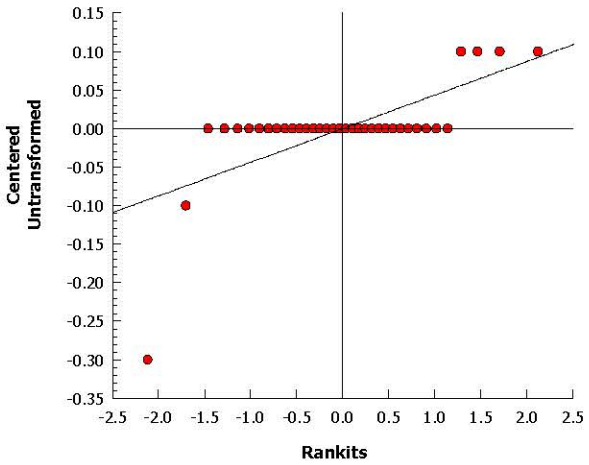
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0033		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	10.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	11-0500-6407	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	09-8966-7680	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.024	>0.024	NA	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0003	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0027	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0033	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0082	2.29	1.64	1	-2	0.0824	Asymp	Non-Significant Effect
		0.024	1.39	1.64	1	-2	0.0824	Asymp	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.05	0.01	5	2.14	0.0874	Non-Significant Effect
Error	0.14	0.004666667	30			
Total	0.19		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	2.14	3.7	0.0874	Equal Variances
Variances	Levene Equality of Variance	16	3.7	<0.0001	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.485	0.917	<0.0001	Non-normal Distribution

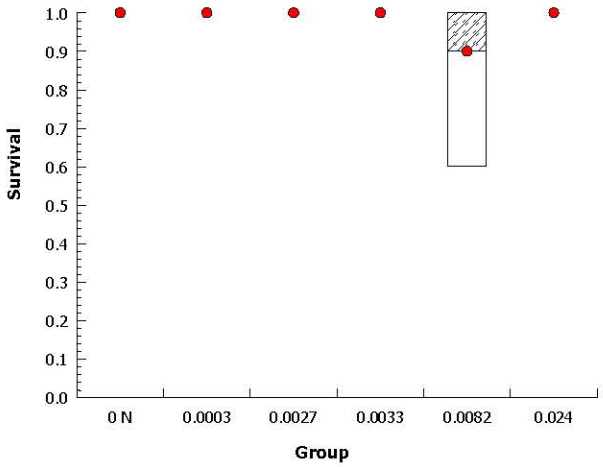
Survival Summary

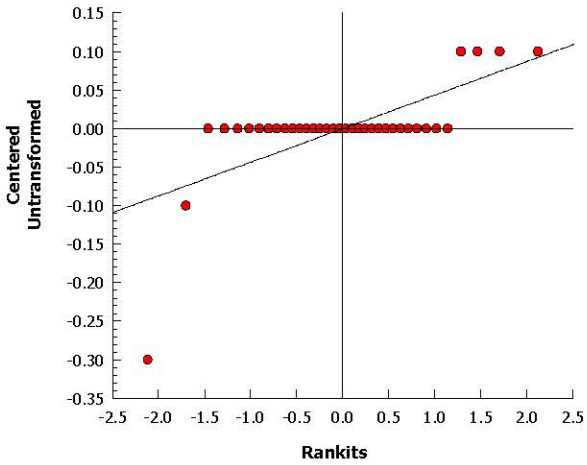
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0027		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0033		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	0.9	0.724	1	1	0.6	1	0.0683	18.6%	10.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	09-8966-7680	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	03-0116-9781	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	15.9%	0.0082	0.024	0.01403	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0003	-1.41	2.34	0.595	10	0.9952	CDF	Non-Significant Effect
		0.0027	0.334	2.34	0.595	10	0.7164	CDF	Non-Significant Effect
		0.0033	-0.19	2.34	0.595	10	0.8834	CDF	Non-Significant Effect
		0.0082	0.988	2.34	0.595	10	0.4240	CDF	Non-Significant Effect
		0.024*	4.89	2.34	0.595	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	9.127325	1.825465	5	9.38	<0.0001	Significant Effect
Error	5.83535	0.1945117	30			
Total	14.96268		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.48	15.1	0.3604	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.976	0.917	0.5942	Normal Distribution

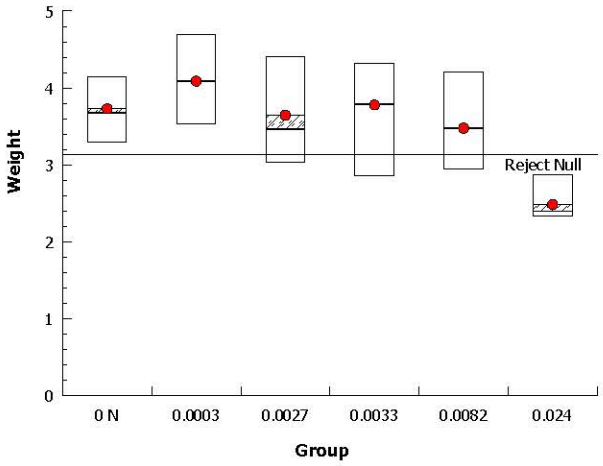
Weight Summary

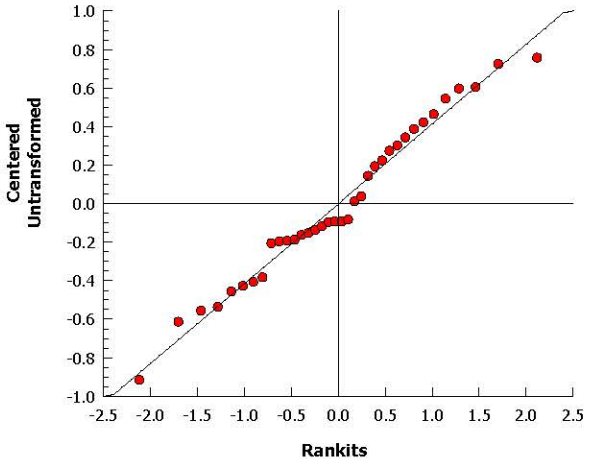
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	3.73	3.4	4.06	3.67	3.3	4.15	0.129	8.5%	0.0%
0.0003		6	4.09	3.61	4.57	4.1	3.53	4.69	0.187	11.2%	-9.61%
0.0027		6	3.64	3.07	4.22	3.47	3.03	4.4	0.225	15.1%	2.28%
0.0033		6	3.78	3.22	4.33	3.8	2.86	4.32	0.216	14.0%	-1.3%
0.0082		6	3.48	2.97	3.98	3.47	2.94	4.2	0.198	13.9%	6.75%
0.024		6	2.48	2.27	2.69	2.39	2.33	2.87	0.0814	8.03%	33.4%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	03-0116-9781	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-3936-5593	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	12.4%	0.0082	0.024	0.01403	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0003	-1.41	1.7	0.432	10	>0.05	CDF	Non-Significant Effect
		0.0027	0.334	1.78	0.452	10	>0.05	CDF	Non-Significant Effect
		0.0033	0.072	1.8	0.459	10	>0.05	CDF	Non-Significant Effect
		0.0082	0.988	1.81	0.462	10	>0.05	CDF	Non-Significant Effect
		0.024*	4.89	1.82	0.464	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	9.127325	1.825465	5	9.38	<0.0001	Significant Effect
Error	5.83535	0.1945117	30			
Total	14.96268		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.48	15.1	0.3604	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.976	0.917	0.5942	Normal Distribution

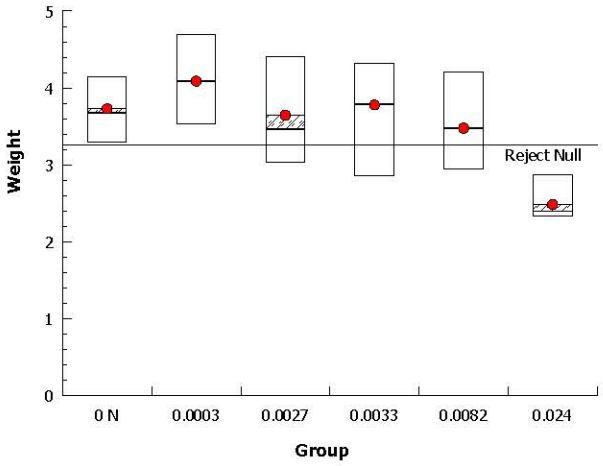
Weight Summary

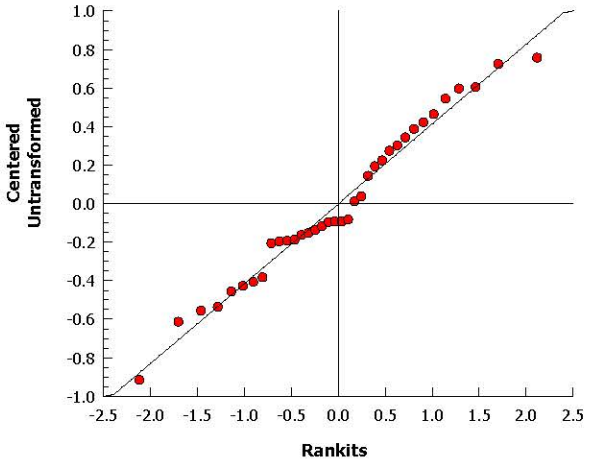
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	3.73	3.4	4.06	3.67	3.3	4.15	0.129	8.5%	0.0%
0.0003		6	4.09	3.61	4.57	4.1	3.53	4.69	0.187	11.2%	-9.61%
0.0027		6	3.64	3.07	4.22	3.47	3.03	4.4	0.225	15.1%	2.28%
0.0033		6	3.78	3.22	4.33	3.8	2.86	4.32	0.216	14.0%	-1.3%
0.0082		6	3.48	2.97	3.98	3.47	2.94	4.2	0.198	13.9%	6.75%
0.024		6	2.48	2.27	2.69	2.39	2.33	2.87	0.0814	8.03%	33.4%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-3936-5593	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	02-7016-6216	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	12.4%	0.0082	0.024	0.01403	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0003	-1.41	1.7	0.432	10	>0.05	CDF	Non-Significant Effect
		0.0027	0.334	1.78	0.452	10	>0.05	CDF	Non-Significant Effect
		0.0033	0.072	1.8	0.459	10	>0.05	CDF	Non-Significant Effect
		0.0082	0.988	1.81	0.462	10	>0.05	CDF	Non-Significant Effect
		0.024*	4.89	1.82	0.464	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	9.127325	1.825465	5	9.38	<0.0001	Significant Effect
Error	5.83535	0.1945117	30			
Total	14.96268		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.48	15.1	0.3604	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.976	0.917	0.5942	Normal Distribution

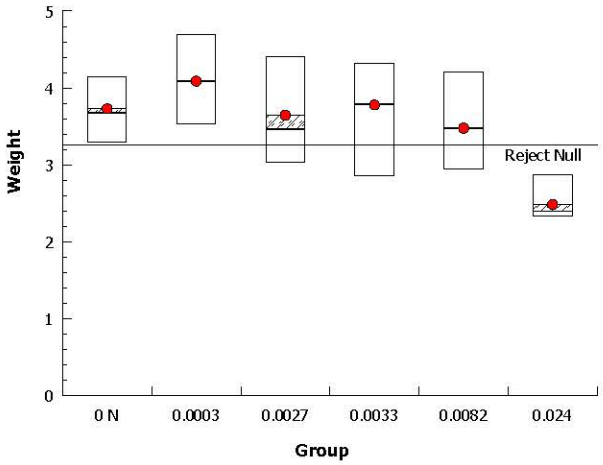
Weight Summary

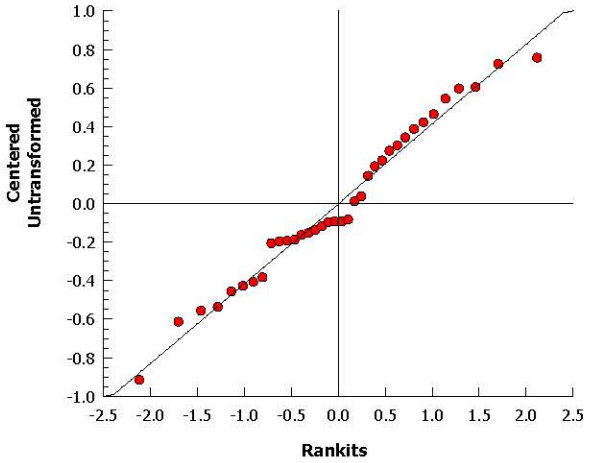
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	3.73	3.4	4.06	3.67	3.3	4.15	0.129	8.5%	0.0%
0.0003		6	4.09	3.61	4.57	4.1	3.53	4.69	0.187	11.2%	-9.61%
0.0027		6	3.64	3.07	4.22	3.47	3.03	4.4	0.225	15.1%	2.28%
0.0033		6	3.78	3.22	4.33	3.8	2.86	4.32	0.216	14.0%	-1.3%
0.0082		6	3.48	2.97	3.98	3.47	2.94	4.2	0.198	13.9%	6.75%
0.024		6	2.48	2.27	2.69	2.39	2.33	2.87	0.0814	8.03%	33.4%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	02-7016-6216	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:38	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-7684-1790	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	03-3476-4657	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 17:14	**Species:**	Daucus carota	**Brine:**	
Duration:	516d 17h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	18-7382-4495	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 17:14	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
12	34.6	-62.5	-58.5	0.5642	Yes	0.916	2.92	0.4452	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.00463	N/A	0.00781
IC10	0.0074	0.00327	0.0114
IC25	0.0162	0.0122	0.0207
IC50	0.0388	0.0249	0.0606

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	3.87	0.119	3.63	4.1	32.6	<0.0001	Significant Parameter
C	1.29	0.393	0.522	2.06	3.29	0.0024	Significant Parameter
D	0.0388	0.00821	0.0227	0.0549	4.73	<0.0001	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	2.495141	2.495141	1	47.3	<0.0001	Significant
Lack of Fit	0.145995	0.048665	3	0.916	0.4452	Non-Significant
Pure Error	1.594582	0.053153	30			
Residual	1.740577	0.052745	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	1.74	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	1.74	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	4.19	11.1	0.5218	Equal Variances
	Mod Levene Equality of Variance	1.07	2.53	0.3954	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.973	0.94	0.5168	Normal Distribution
	Anderson-Darling A2 Normality	0.438	2.49	0.2989	Normal Distribution

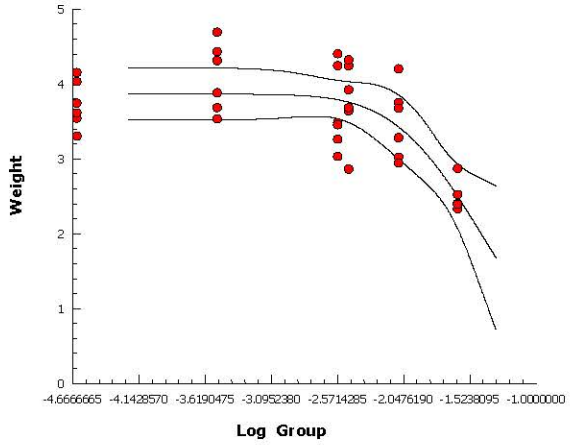
Weight Summary

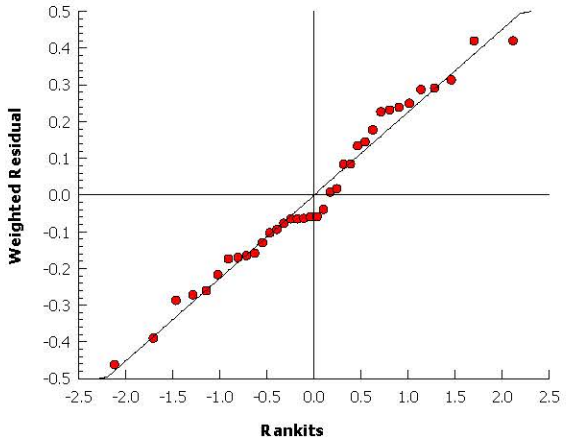
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	3.73	3.3	4.15	0.129	0.317	8.5%	0.0%
0.0003		6	4.09	3.53	4.69	0.187	0.458	11.2%	-9.61%
0.0027		6	3.64	3.03	4.4	0.225	0.551	15.1%	2.28%
0.0033		6	3.78	2.86	4.32	0.216	0.529	14.0%	-1.3%
0.0082		6	3.48	2.94	4.2	0.198	0.484	13.9%	6.75%
0.024		6	2.48	2.33	2.87	0.0814	0.199	8.03%	33.4%

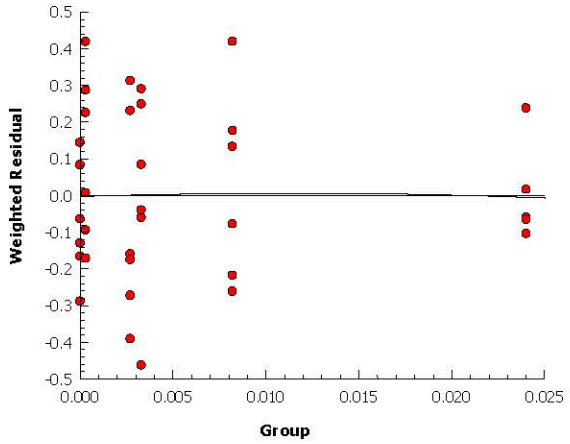
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

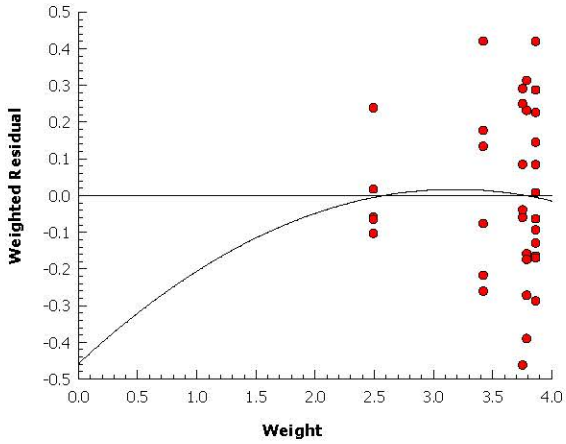
Analysis ID:	16-7684-1790	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:37	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics — 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	

Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
16-9978-1826	Height	0.2111	0.6474	0.3697	19.8%		Dunnett Multiple Comparison Test
18-1063-8773	Height	0.0721	0.2111	0.1234	15.0%		Williams Multiple Comparison Test
18-8371-4823	Survival	0.0721	0.2111	0.1234	NA		Jonckheere-Terpstra Step-Down Test
02-0247-4792	Survival	0.2111	0.6474	0.3697	14.0%		Mann-Whitney U Two-Sample Test
07-0980-6612	Weight	0.0721	0.2111	0.1234	NA		Jonckheere-Terpstra Step-Down Test
00-6805-0864	Weight	0.0721	0.2111	0.1234	44.1%		Mann-Whitney U Two-Sample Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
06-0139-0694	Height	IC5	0.051	N/A	0.101		Nonlinear Regression
		IC10	0.0981	0.0434	0.163		
		IC25	0.293	0.199	0.41		
		IC50	0.987	0.737	1.32		
01-7998-1010	Survival	EC5	0.285	0.15	0.405		Linear Regression (MLE)
		EC10	0.37	0.219	0.502		
		EC25	0.574	0.402	0.737		
		EC50	0.934	0.727	1.22		
17-1391-2216	Survival	EC50	0.963	0.724	1.28		Trimmed Spearman-Kärber
19-1063-3159	Weight	IC5	0.028	N/A	0.0742		Nonlinear Regression
		IC10	0.0438	N/A	0.0898		
		IC25	0.0924	0.0402	0.161		
		IC50	0.212	0.139	0.323		

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	30.7	27.4	34	25.8	35.6	1.29	3.16	10.3%	0.0%
0	Negative Control	6	29	26	32	25.4	33.4	1.15	2.82	9.72%	5.54%
0.024		6	29.2	26.7	31.7	26	32.4	0.967	2.37	8.1%	4.78%
0.0721		6	29.8	26.5	33.1	27	34.6	1.29	3.17	10.6%	2.93%
0.2111		6	25.4	21.9	29	19.6	29.6	1.38	3.39	13.3%	17.2%
0.6474		6	15.5	12.4	18.6	11.7	19.7	1.21	2.96	19.2%	49.6%
1.9699		2	13.2	-14.2	40.5	11	15.3	2.15	3.04	23.1%	57.2%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2111		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	3.33%
0.6474		6	0.733	0.517	0.95	0.6	1	0.0843	0.207	28.2%	26.7%
1.9699		6	0.133	0	0.388	0	0.6	0.0989	0.242	182.0%	86.7%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	0.243	0.197	0.289	0.202	0.304	0.0179	0.0439	18.1%	0.0%
0	Negative Control	6	0.223	0.137	0.309	0.11	0.316	0.0336	0.0822	36.9%	8.1%
0.024		6	0.204	0.146	0.261	0.122	0.282	0.0225	0.055	27.0%	16.1%
0.0721		6	0.205	0.107	0.303	0.11	0.352	0.0383	0.0937	45.7%	15.5%
0.2111		6	0.116	0.0793	0.153	0.07	0.17	0.0143	0.035	30.1%	52.2%
0.6474		6	0.0257	0.0137	0.0377	0.008	0.04	0.00467	0.0114	44.5%	89.4%
1.9699		2	0.0265	-0.0561	0.109	0.02	0.033	0.0065	0.00919	34.7%	89.1%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	31.6	30.8	29.6	25.8	30.8	35.6
0	Negative Control	33.4	25.4	29.6	30.6	27.6	27.4
0.024		27.2	32.4	30.6	30.4	26	28.8
0.0721		32.8	27	29.2	27.2	28	34.6
0.2111		27.4	24.6	19.6	26.5	29.6	24.8
0.6474		17.8	13	11.7	15	15.6	19.7
1.9699			11			15.3	

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.024		1	1	1	1	1	1
0.0721		1	1	1	1	1	1
0.2111		1	1	1	0.8	1	1
0.6474		1	0.6	0.6	0.6	1	0.6
1.9699		0	0.2	0	0	0.6	0

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	0.254	0.206	0.282	0.202	0.208	0.304
0	Negative Control	0.316	0.11	0.23	0.31	0.154	0.218
0.024		0.164	0.282	0.226	0.21	0.122	0.218
0.0721		0.28	0.11	0.186	0.178	0.124	0.352
0.2111		0.142	0.104	0.07	0.108	0.17	0.102
0.6474		0.03	0.027	0.017	0.04	0.032	0.008
1.9699			0.02			0.033	

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-9978-1826	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	19.8%	0.2111	0.6474	0.3697	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	-0.136	2.37	4.06	10	0.8882	CDF	Non-Significant Effect
		0.0721	-0.467	2.37	4.06	10	0.9473	CDF	Non-Significant Effect
		0.2111	2.09	2.37	4.06	10	0.0863	CDF	Non-Significant Effect
		0.6474*	7.9	2.37	4.06	10	<0.0001	CDF	Significant Effect
		1.9699*	6.55	2.37	5.74	6	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1168.959	233.7917	5	26.6	<0.0001	Significant Effect
Error	228.64	8.793846	26			
Total	1397.599		31			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	0.626	15.1	0.9868	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.976	0.908	0.6679	Normal Distribution

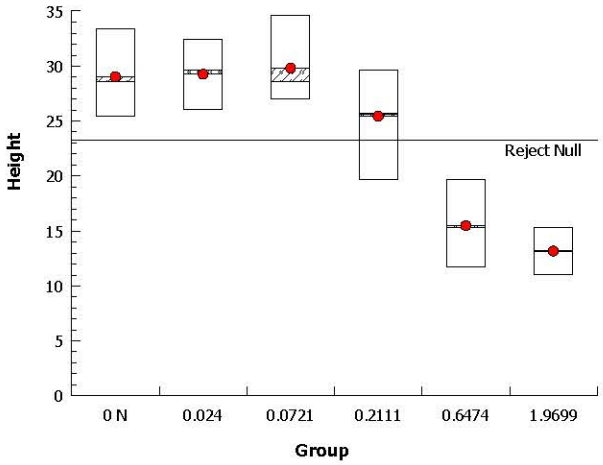
Height Summary

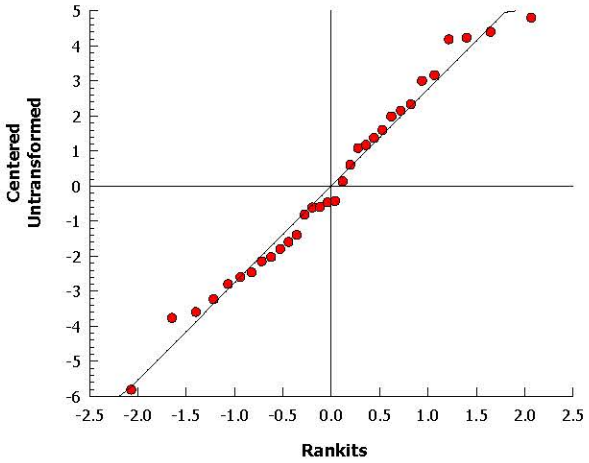
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	29	26	32	28.6	25.4	33.4	1.15	9.72%	0.0%
0.024		6	29.2	26.7	31.7	29.6	26	32.4	0.967	8.1%	-0.81%
0.0721		6	29.8	26.5	33.1	28.6	27	34.6	1.29	10.6%	-2.76%
0.2111		6	25.4	21.9	29	25.6	19.6	29.6	1.38	13.3%	12.4%
0.6474		6	15.5	12.4	18.6	15.3	11.7	19.7	1.21	19.2%	46.7%
1.9699		2	13.2	-14.2	40.5	13.1	11	15.3	2.15	23.1%	54.7%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-9978-1826	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	18-1063-8773	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:41	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	15.0%	0.0721	0.2111	0.1234	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	-0.136	1.71	2.92	10	>0.05	CDF	Non-Significant Effect
		0.0721	-0.302	1.78	3.06	10	>0.05	CDF	Non-Significant Effect
		0.2111*	2.09	1.81	3.1	10	<0.05	CDF	Significant Effect
		0.6474*	7.9	1.82	3.12	10	<0.05	CDF	Significant Effect
		1.9699*	6.55	1.8	4.35	6	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1168.959	233.7917	5	26.6	<0.0001	Significant Effect
Error	228.64	8.793846	26			
Total	1397.599		31			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	0.626	15.1	0.9868	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.976	0.908	0.6679	Normal Distribution

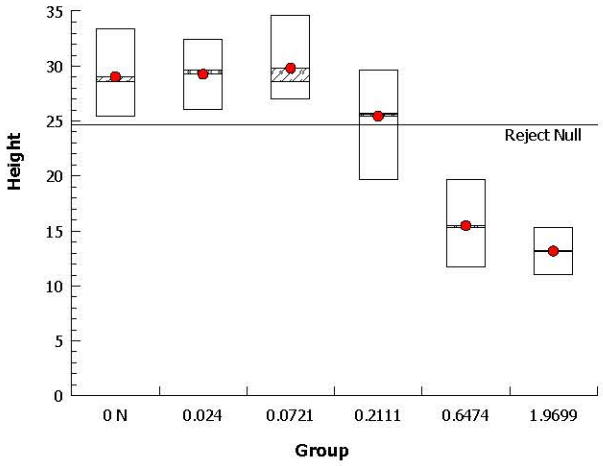
Height Summary

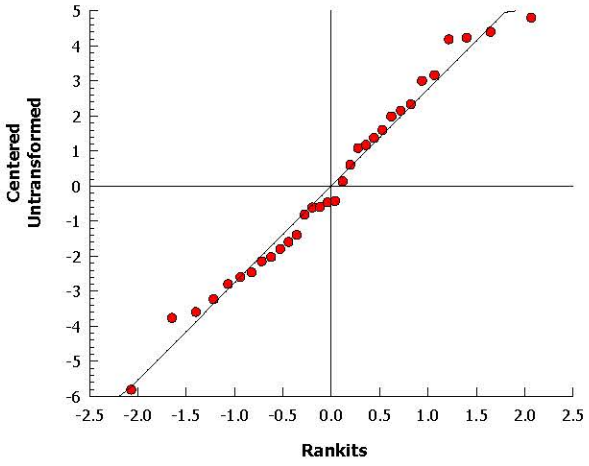
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	29	26	32	28.6	25.4	33.4	1.15	9.72%	0.0%
0.024		6	29.2	26.7	31.7	29.6	26	32.4	0.967	8.1%	-0.81%
0.0721		6	29.8	26.5	33.1	28.6	27	34.6	1.29	10.6%	-2.76%
0.2111		6	25.4	21.9	29	25.6	19.6	29.6	1.38	13.3%	12.4%
0.6474		6	15.5	12.4	18.6	15.3	11.7	19.7	1.21	19.2%	46.7%
1.9699		2	13.2	-14.2	40.5	13.1	11	15.3	2.15	23.1%	54.7%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	18-1063-8773	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:41	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	02-0247-4792	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	14.0%	0.2111	0.6474	0.3697	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0721	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.2111	21	NA	1	10	0.5000	Exact	Non-Significant Effect
		0.6474*	30	NA	1	10	0.0303	Exact	Significant Effect
		1.9699*	36	NA	0	10	0.0011	Exact	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	3.578889	0.7157778	5	39.8	<0.0001	Significant Effect
Error	0.54	0.018	30			
Total	4.118889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	1.44	3.7	0.2373	Equal Variances
Variances	Levene Equality of Variance	9.65	3.7	<0.0001	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.742	0.917	<0.0001	Non-normal Distribution

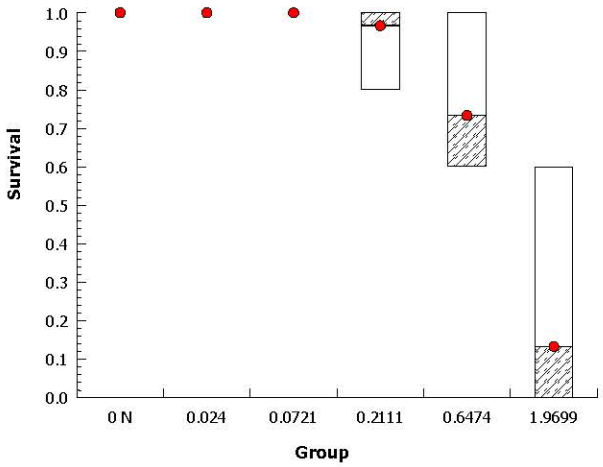
Survival Summary

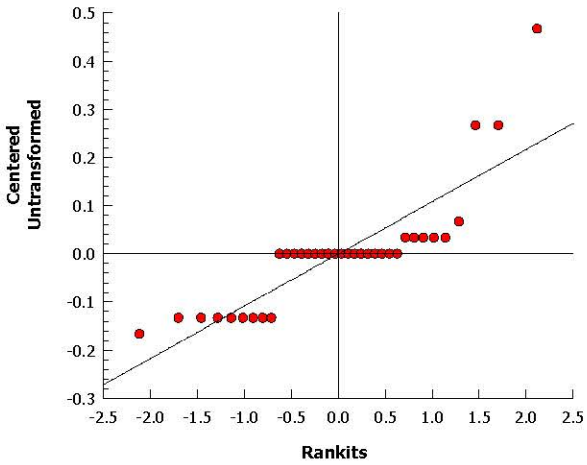
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%
0.6474		6	0.733	0.517	0.95	0.6	0.6	1	0.0843	28.2%	26.7%
1.9699		6	0.133	0	0.388	0	0	0.6	0.0989	182.0%	86.7%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	02-0247-4792	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	18-8371-4823	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:41	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0721	0.2111	0.1234	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0721	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.2111*	2.02	1.64	1	-2	0.0219	Asymp	Significant Effect
		0.6474*	3.29	1.64	2	-2	0.0005	Asymp	Significant Effect
		1.9699*	4.97	1.64	3	-2	<0.0001	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	3.578889	0.7157778	5	39.8	<0.0001	Significant Effect
Error	0.54	0.018	30			
Total	4.118889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	1.44	3.7	0.2373	Equal Variances
Variances	Levene Equality of Variance	9.65	3.7	<0.0001	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.742	0.917	<0.0001	Non-normal Distribution

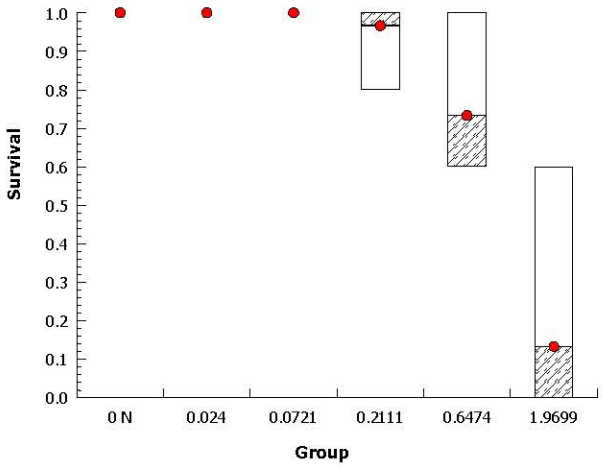
Survival Summary

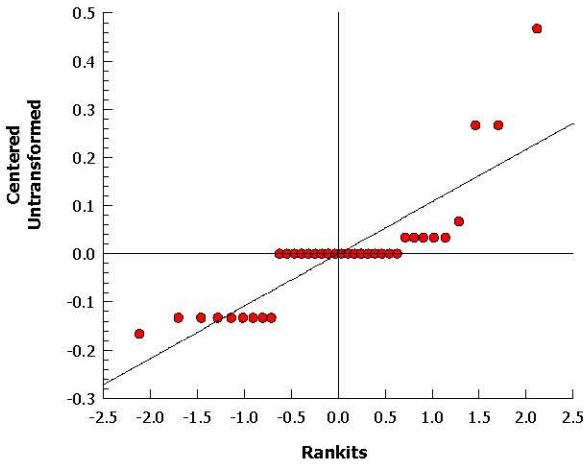
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%
0.6474		6	0.733	0.517	0.95	0.6	0.6	1	0.0843	28.2%	26.7%
1.9699		6	0.133	0	0.388	0	0	0.6	0.0989	182.0%	86.7%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	18-8371-4823	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:41	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	00-6805-0864	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	44.1%	0.0721	0.2111	0.1234	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	21.5	NA	1	10	0.3117	Exact	Non-Significant Effect
		0.0721	20.5	NA	1	10	0.3690	Exact	Non-Significant Effect
		0.2111*	33	NA	0	10	0.0076	Exact	Significant Effect
		0.6474*	36	NA	0	10	0.0011	Exact	Significant Effect
		1.9699*	12	NA	0	6	0.0357	Exact	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.1972401	0.03944801	5	10.3	<0.0001	Significant Effect
Error	0.09970517	0.003834814	26			
Total	0.2969452		31			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	18.2	15.1	0.0027	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.959	0.908	0.2524	Normal Distribution

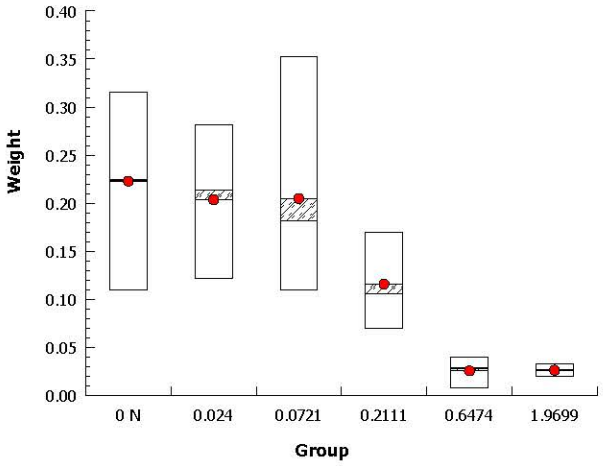
Weight Summary

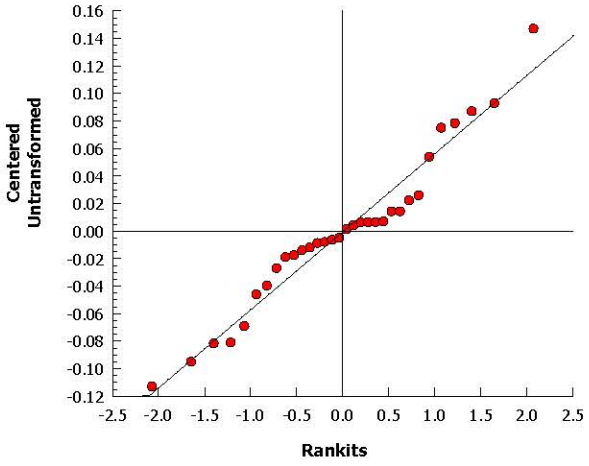
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	0.223	0.137	0.309	0.224	0.11	0.316	0.0336	36.9%	0.0%
0.024		6	0.204	0.146	0.261	0.214	0.122	0.282	0.0225	27.0%	8.67%
0.0721		6	0.205	0.107	0.303	0.182	0.11	0.352	0.0383	45.7%	8.07%
0.2111		6	0.116	0.0793	0.153	0.106	0.07	0.17	0.0143	30.1%	48.0%
0.6474		6	0.0257	0.0137	0.0377	0.0285	0.008	0.04	0.00467	44.5%	88.5%
1.9699		2	0.0265	-0.0561	0.109	0.0265	0.02	0.033	0.0065	34.7%	88.1%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	00-6805-0864	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	07-0980-6612	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:41	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0721	0.2111	0.1234	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	0.562	1.64	1	-2	0.2870	Asymp	Non-Significant Effect
		0.0721	0.648	1.64	2	-2	0.2586	Asymp	Non-Significant Effect
		0.2111*	2.68	1.64	2	-2	0.0037	Asymp	Significant Effect
		0.6474*	4.53	1.64	2	-2	<0.0001	Asymp	Significant Effect
		1.9699*	4.86	1.64	2	-2	<0.0001	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.1972401	0.03944801	5	10.3	<0.0001	Significant Effect
Error	0.09970517	0.003834814	26			
Total	0.2969452		31			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	18.2	15.1	0.0027	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.959	0.908	0.2524	Normal Distribution

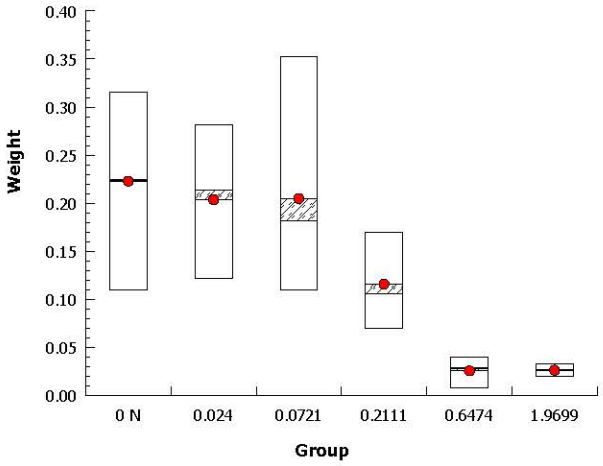
Weight Summary

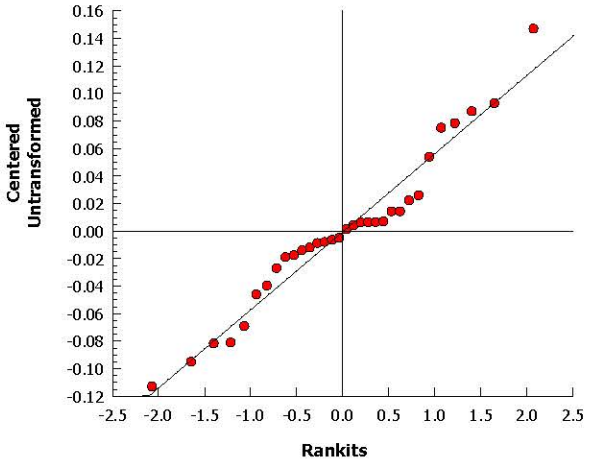
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	0.223	0.137	0.309	0.224	0.11	0.316	0.0336	36.9%	0.0%
0.024		6	0.204	0.146	0.261	0.214	0.122	0.282	0.0225	27.0%	8.67%
0.0721		6	0.205	0.107	0.303	0.182	0.11	0.352	0.0383	45.7%	8.07%
0.2111		6	0.116	0.0793	0.153	0.106	0.07	0.17	0.0143	30.1%	48.0%
0.6474		6	0.0257	0.0137	0.0377	0.0285	0.008	0.04	0.00467	44.5%	88.5%
1.9699		2	0.0265	-0.0561	0.109	0.0265	0.02	0.033	0.0065	34.7%	88.1%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	07-0980-6612	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:41	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	01-7998-1010	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Linear Regression (MLE)	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Linear Regression Options

Model Function	Threshold Option	Threshold	Optimized	Pooled	Het Corr	Weighted
Log-Normal [NED=A+B*log(X)]	Control Threshold	1E-07	No	No	No	Yes

Regression Summary

Iters	LL	AICc	BIC	Mu	Sigma	Adj R2	F Stat	Critical	P-Value	Decision(α:5%)
8	-33.8	72	74.8	-0.0296	0.314	0.799	0.743	2.69	0.5700	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
EC5	0.285	0.15	0.405
EC10	0.37	0.219	0.502
EC25	0.574	0.402	0.737
EC50	0.934	0.727	1.22

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
Slope	3.19	0.546	2.12	4.26	5.83	<0.0001	Significant Parameter
Intercept	0.0943	0.175	-0.248	0.437	0.539	0.5934	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	105.8498	105.8498	1	140	<0.0001	Significant
Lack of Fit	2.310772	0.577693	4	0.743	0.5702	Non-Significant
Pure Error	23.31927	0.777309	30			
Residual	25.63004	0.753825	34			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	25.6	48.6	0.8485	Non-Significant Heterogenity
	Likelihood Ratio GOF	24	48.6	0.8984	Non-Significant Heterogenity
Variances	Mod Levene Equality of Variance	1.04	2.53	0.4140	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.79	0.94	<0.0001	Non-normal Distribution
	Anderson-Darling A2 Normality	3.44	2.49	<0.0001	Non-normal Distribution

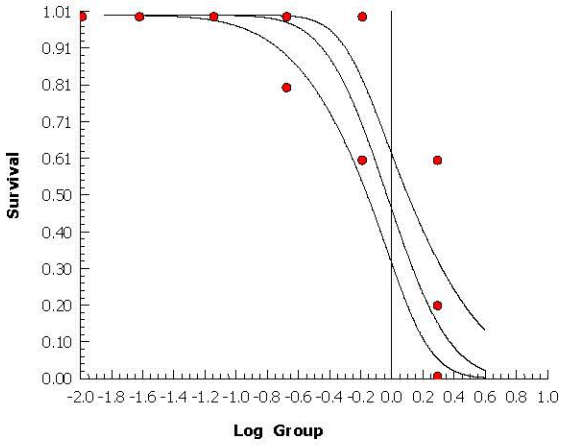
Survival Summary

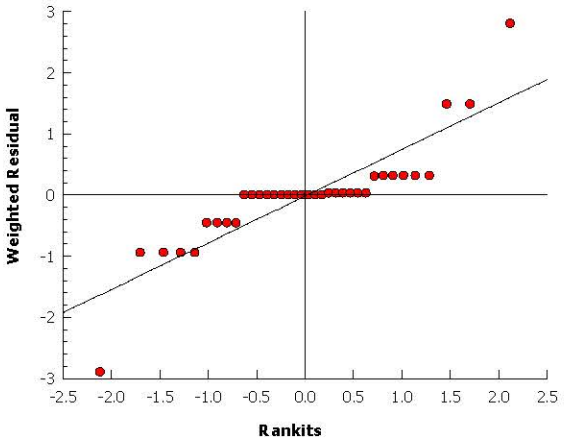
			Calculated Variate(A/B)								
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	6	1	1	1	0	0	0.0%	0.0%	30	30
0.024		6	1	1	1	0	0	0.0%	0.0%	30	30
0.0721		6	1	1	1	0	0	0.0%	0.0%	30	30
0.2111		6	0.967	0.8	1	0.0333	0.0816	8.45%	3.33%	29	30
0.6474		6	0.733	0.6	1	0.0843	0.207	28.2%	26.7%	22	30
1.9699		6	0.133	0	0.6	0.0989	0.242	182.0%	86.7%	4	30

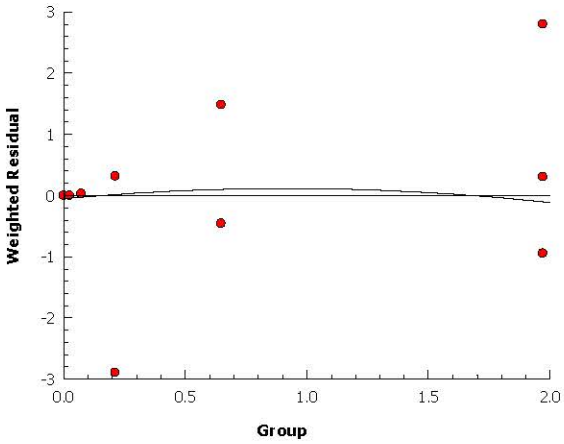
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

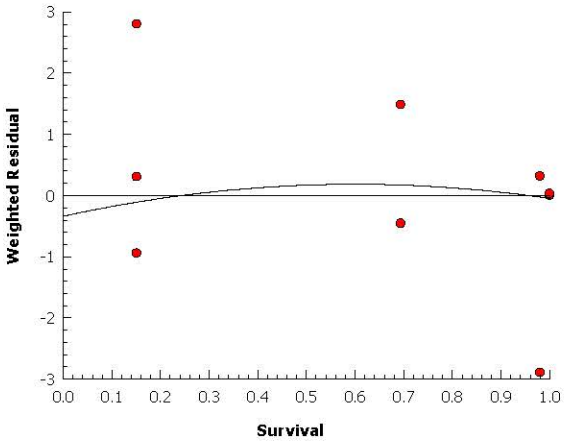
Analysis ID:	01-7998-1010	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Linear Regression (MLE)	**Official Results:**	Yes

Graphics — Log-Normal [NED=A+B*log(X)]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	06-0139-0694	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
18	1800	-3590	-3590	0.7262	Yes	3.98	2.98	0.0186	Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.051	N/A	0.101
IC10	0.0981	0.0434	0.163
IC25	0.293	0.199	0.41
IC50	0.987	0.737	1.32

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	30.2	1.23	27.7	32.6	24.4	<0.0001	Significant Parameter
C	1.8	0.332	1.15	2.45	5.43	<0.0001	Significant Parameter
D	0.987	0.173	0.648	1.33	5.7	<0.0001	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	41.59687	41.59687	1	84.2	<0.0001	Significant
Lack of Fit	4.503656	1.501219	3	3.98	0.0186	Significant
Pure Error	9.817408	0.377593	26			
Residual	14.32106	0.49383	29			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	14.3	42.6	0.9896	Non-Significant Heterogenity
	Likelihood Ratio GOF	14.4	42.6	0.9892	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	1.81	11.1	0.8742	Equal Variances
	Mod Levene Equality of Variance	0.337	2.59	0.8859	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.989	0.934	0.9797	Normal Distribution
	Anderson-Darling A2 Normality	0.197	2.49	0.9349	Normal Distribution

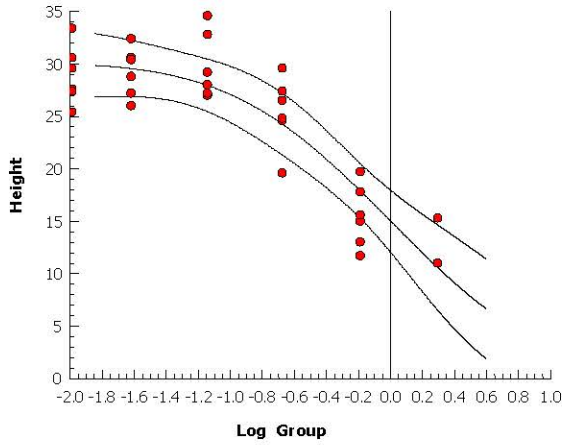
Height Summary

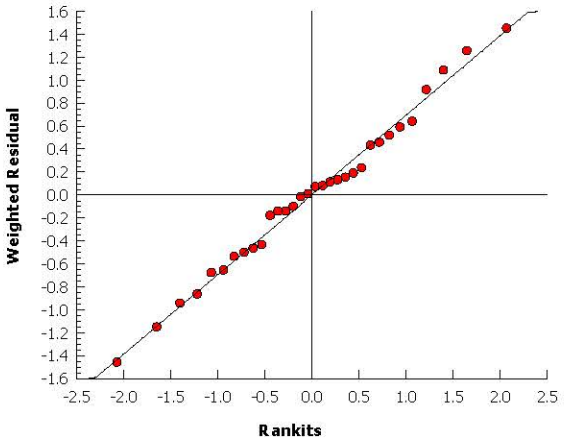
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	29	25.4	33.4	1.15	2.82	9.72%	0.0%
0.024		6	29.2	26	32.4	0.967	2.37	8.1%	-0.81%
0.0721		6	29.8	27	34.6	1.29	3.17	10.6%	-2.76%
0.2111		6	25.4	19.6	29.6	1.38	3.39	13.3%	12.4%
0.6474		6	15.5	11.7	19.7	1.21	2.96	19.2%	46.7%
1.9699		2	13.2	11	15.3	2.15	3.04	23.1%	54.7%

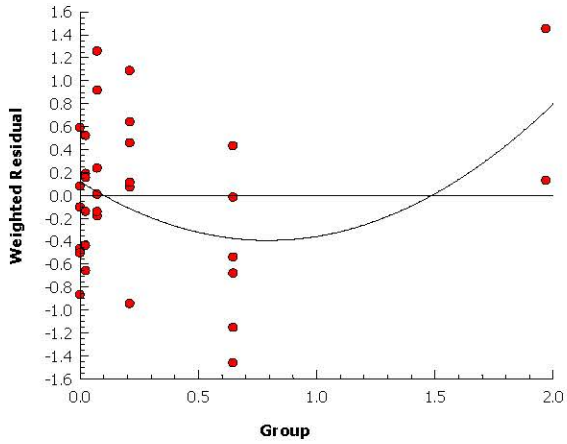
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

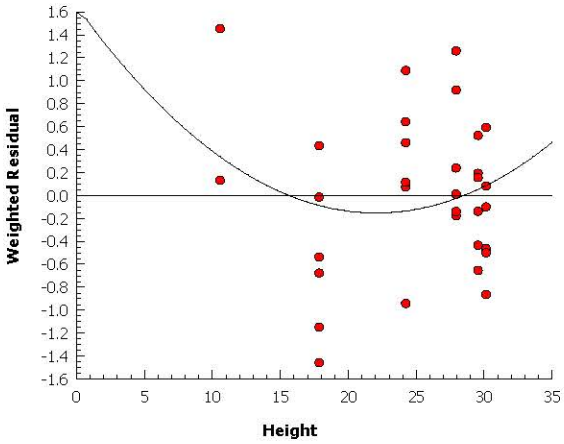
Analysis ID:	06-0139-0694	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-1063-3159	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
10	-12.9	32.7	36.2	0.6384	Yes	2.72	2.98	0.0652	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.028	N/A	0.0742
IC10	0.0438	N/A	0.0898
IC25	0.0924	0.0402	0.161
IC50	0.212	0.139	0.323

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	0.226	0.0239	0.179	0.273	9.42	<0.0001	Significant Parameter
C	1.23	0.289	0.663	1.8	4.25	0.0002	Significant Parameter
D	0.212	0.0641	0.0862	0.337	3.3	0.0025	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	1.339862	1.339862	1	56.7	<0.0001	Significant
Lack of Fit	0.163457	0.054485	3	2.72	0.0652	Non-Significant
Pure Error	0.521452	0.020056	26			
Residual	0.684908	0.023618	29			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	0.685	42.6	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	0.643	42.6	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	8.22	11.1	0.1443	Equal Variances
	Mod Levene Equality of Variance	1.28	2.59	0.3021	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.952	0.934	0.1631	Normal Distribution
	Anderson-Darling A2 Normality	0.684	2.49	0.0741	Normal Distribution

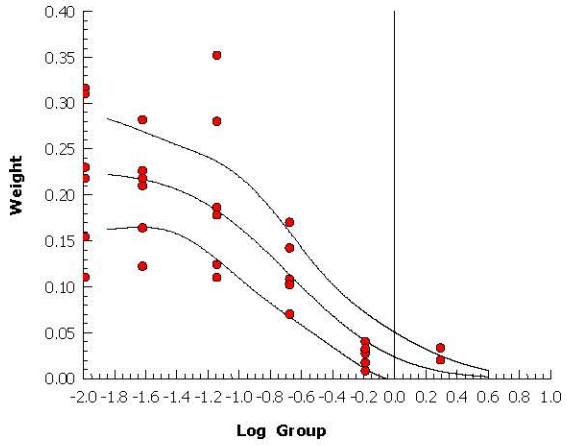
Weight Summary

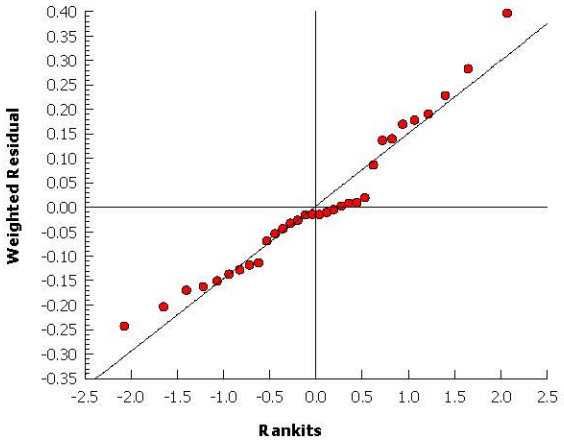
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	0.223	0.11	0.316	0.0336	0.0822	36.9%	0.0%
0.024		6	0.204	0.122	0.282	0.0225	0.055	27.0%	8.67%
0.0721		6	0.205	0.11	0.352	0.0383	0.0937	45.7%	8.07%
0.2111		6	0.116	0.07	0.17	0.0143	0.035	30.1%	48.0%
0.6474		6	0.0257	0.008	0.04	0.00467	0.0114	44.5%	88.5%
1.9699		2	0.0265	0.02	0.033	0.0065	0.00919	34.7%	88.1%

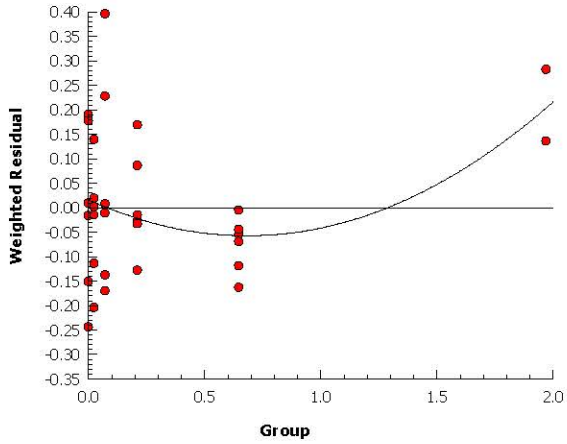
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

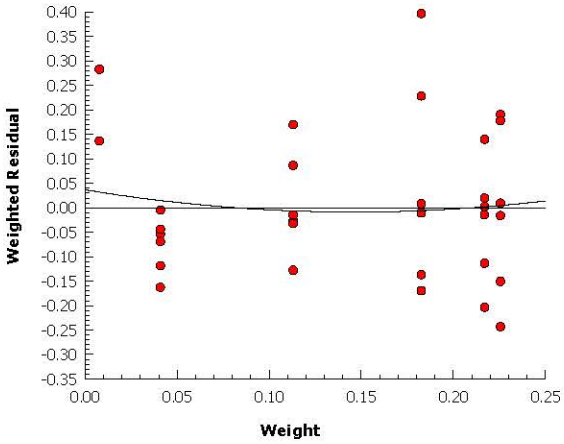
Analysis ID:	19-1063-3159	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









CETIS Analytical Report

Test Code: 48718015 Onion | 12-1866-7089

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	17-1391-2216	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:40	**Analysis:**	Trimmed Spearman-Kärber	**Official Results:**	Yes
Batch ID:	10-8476-1536	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:17	**Species:**	Allium cepa	**Brine:**	
Duration:	516d 16h	**Source:**	Park Seed Co.	**Age:**	
Sample ID:	16-3286-2333	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:17	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

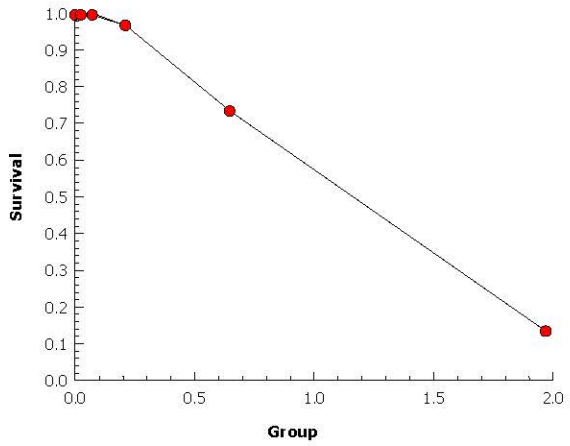
Trimmed Spearman-Kärber Estimates

Threshold Option	Threshold	Trim	Mu	Sigma	EC50	95% LCL	95% UCL
Control Threshold	0	13.33%	-0.0164	0.0619	0.963	0.724	1.28

Survival Summary **Calculated Variate(A/B)**

Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	6	1	1	1	0	0	0.0%	0.0%	30	30
0.024		6	1	1	1	0	0	0.0%	0.0%	30	30
0.0721		6	1	1	1	0	0	0.0%	0.0%	30	30
0.2111		6	0.967	0.8	1	0.0333	0.0816	8.45%	3.33%	29	30
0.6474		6	0.733	0.6	1	0.0843	0.207	28.2%	26.7%	22	30
1.9699		6	0.133	0	0.6	0.0989	0.242	182.0%	86.7%	4	30

Graphics



OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	

Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
15-1853-1636	Height	0.2113	>0.2113	NA	10.0%		Dunnett Multiple Comparison Test
06-3021-9516	Height	0.2113	>0.2113	NA	7.81%		Williams Multiple Comparison Test
16-9307-2766	Survival	0.0224	0.0661	0.03848	NA		Jonckheere-Terpstra Step-Down Test
19-8532-3059	Survival	0.2113	>0.2113	NA	4.93%		Mann-Whitney U Two-Sample Test
12-4802-6411	Weight	0.0661	0.2113	0.1182	19.2%		Dunnett Multiple Comparison Test
12-8044-5477	Weight	0.0661	0.2113	0.1182	15.0%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
18-2946-4999	Height	IC5	23.3	N/A	1.55E+09		Nonlinear Regression
		IC10	9950	N/A	7E+21		
		IC25	24700000	N/A	N/A		
		IC50	18800000	N/A	N/A		
01-0318-3640	Survival	EC5	0.243	N/A	N/A		Linear Regression (MLE)
		EC10	0.615	N/A	N/A		
		EC25	2.9	N/A	N/A		
		EC50	16.3	N/A	N/A		
13-6512-8476	Weight	IC5	0.0146	N/A	0.038		Nonlinear Regression
		IC10	0.0326	0.00736	0.0701		
		IC25	0.125	0.0754	0.193		
		IC50	0.554	0.185	1.66		

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	34.5	31.5	37.5	31.2	38	1.17	2.87	8.31%	0.0%
0	Negative Control	6	35.4	32.4	38.3	31.8	38.6	1.14	2.8	7.92%	-2.51%
0.0026		6	35.8	32.1	39.4	30.4	40.8	1.42	3.49	9.75%	-3.67%
0.0076		6	35.1	31.6	38.6	30.8	39	1.36	3.33	9.51%	-1.64%
0.0224		6	35.3	33.6	37.1	33.6	37.6	0.677	1.66	4.69%	-2.42%
0.0661		6	34.3	32.1	36.4	30.6	36.4	0.831	2.03	5.94%	0.68%
0.2113		6	34.3	32.4	36.3	32	36.2	0.748	1.83	5.33%	0.48%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	-3.45%
0.0026		6	1	1	1	1	1	0	0	0.0%	-3.45%
0.0076		6	1	1	1	1	1	0	0	0.0%	-3.45%
0.0224		6	1	1	1	1	1	0	0	0.0%	-3.45%
0.0661		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	0.0%
0.2113		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	5.17	3.99	6.35	4.19	7.3	0.459	1.12	21.7%	0.0%
0	Negative Control	6	4.93	4.32	5.54	4.48	6.08	0.236	0.578	11.7%	4.58%
0.0026		6	5.27	4.13	6.41	4.55	7.32	0.443	1.09	20.6%	-2.03%
0.0076		6	4.83	4.05	5.61	4.03	5.89	0.305	0.748	15.5%	6.52%
0.0224		6	4.68	4.07	5.29	3.95	5.43	0.238	0.584	12.5%	9.42%
0.0661		6	4.23	3.71	4.74	3.84	5.01	0.201	0.493	11.7%	18.2%
0.2113		6	3.39	2.81	3.97	2.44	4.15	0.226	0.554	16.3%	34.4%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	33.6	34.4	32	31.2	38	37.8
0	Negative Control	38.6	37	31.8	32.2	37.2	35.4
0.0026		37.6	30.4	35.6	34	36.2	40.8
0.0076		33	30.8	33.6	35	39	39
0.0224		34.8	34.2	33.6	37.6	34.6	37.2
0.0661		35.8	33.8	30.6	34.4	36.4	34.6
0.2113		35.8	32	32.6	33.6	35.8	36.2

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	0.8	1
0	Negative Control	1	1	1	1	1	1
0.0026		1	1	1	1	1	1
0.0076		1	1	1	1	1	1
0.0224		1	1	1	1	1	1
0.0661		1	0.8	1	1	1	1
0.2113		1	0.8	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	4.59	4.79	4.67	4.19	7.3	5.46
0	Negative Control	4.88	4.68	4.74	4.72	4.48	6.08
0.0026		4.72	4.76	4.55	4.6	7.32	5.68
0.0076		4.03	4.94	4.43	4.19	5.89	5.5
0.0224		4.43	5.3	3.95	5.43	4.69	4.28
0.0661		3.86	4.13	4.65	3.87	5.01	3.84
0.2113		4.15	3.4	3.51	3.55	3.28	2.44

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-1853-1636	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	10.0%	0.2113	>0.2113	NA	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0026	-0.264	2.34	3.54	10	0.8997	CDF	Non-Significant Effect
		0.0076	0.198	2.34	3.54	10	0.7682	CDF	Non-Significant Effect
		0.0224	0.022	2.34	3.54	10	0.8267	CDF	Non-Significant Effect
		0.0661	0.726	2.34	3.54	10	0.5446	CDF	Non-Significant Effect
		0.2113	0.682	2.34	3.54	10	0.5648	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	10.90222	2.180444	5	0.316	0.8993	Non-Significant Effect
Error	206.84	6.894667	30			
Total	217.7422		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.53	15.1	0.4760	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.986	0.917	0.9155	Normal Distribution

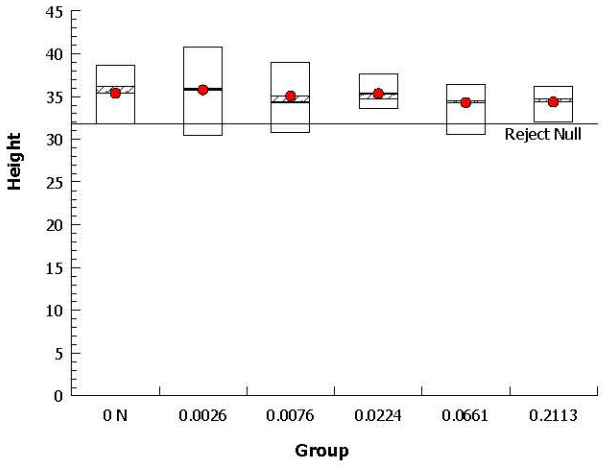
Height Summary

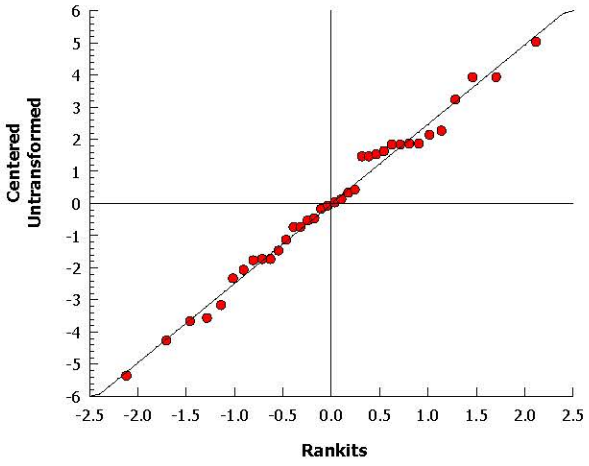
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	35.4	32.4	38.3	36.2	31.8	38.6	1.14	7.92%	0.0%
0.0026		6	35.8	32.1	39.4	35.9	30.4	40.8	1.42	9.75%	-1.13%
0.0076		6	35.1	31.6	38.6	34.3	30.8	39	1.36	9.51%	0.85%
0.0224		6	35.3	33.6	37.1	34.7	33.6	37.6	0.677	4.69%	0.09%
0.0661		6	34.3	32.1	36.4	34.5	30.6	36.4	0.831	5.94%	3.11%
0.2113		6	34.3	32.4	36.3	34.7	32	36.2	0.748	5.33%	2.92%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-1853-1636	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	06-3021-9516	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	7.81%	0.2113	>0.2113	NA	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0026	-0.264	1.7	2.57	10	>0.05	CDF	Non-Significant Effect
		0.0076	0.198	1.78	2.69	10	>0.05	CDF	Non-Significant Effect
		0.0224	0.11	1.8	2.73	10	>0.05	CDF	Non-Significant Effect
		0.0661	0.726	1.81	2.75	10	>0.05	CDF	Non-Significant Effect
		0.2113	0.704	1.82	2.76	10	>0.05	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	10.90222	2.180444	5	0.316	0.8993	Non-Significant Effect
Error	206.84	6.894667	30			
Total	217.7422		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.53	15.1	0.4760	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.986	0.917	0.9155	Normal Distribution

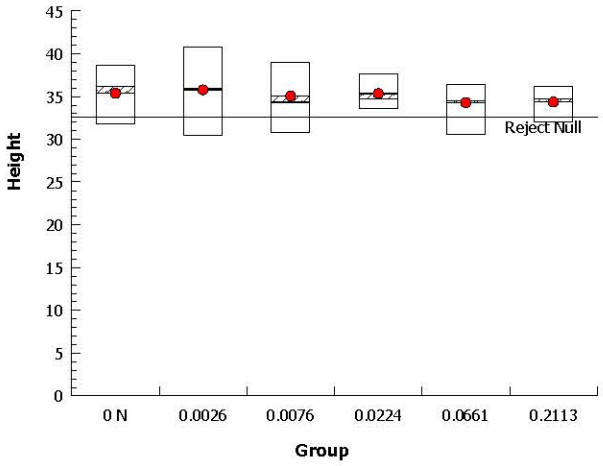
Height Summary

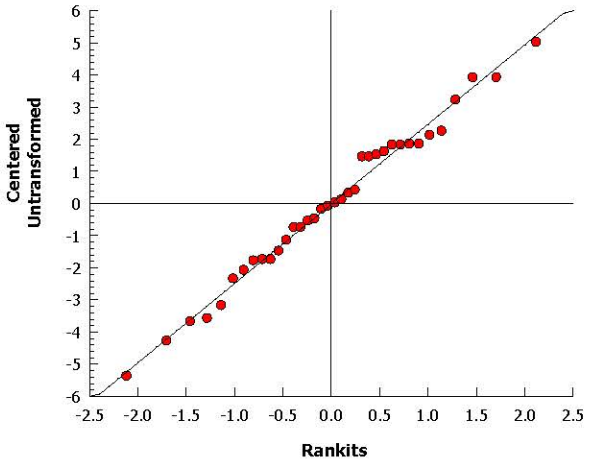
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	35.4	32.4	38.3	36.2	31.8	38.6	1.14	7.92%	0.0%
0.0026		6	35.8	32.1	39.4	35.9	30.4	40.8	1.42	9.75%	-1.13%
0.0076		6	35.1	31.6	38.6	34.3	30.8	39	1.36	9.51%	0.85%
0.0224		6	35.3	33.6	37.1	34.7	33.6	37.6	0.677	4.69%	0.09%
0.0661		6	34.3	32.1	36.4	34.5	30.6	36.4	0.831	5.94%	3.11%
0.2113		6	34.3	32.4	36.3	34.7	32	36.2	0.748	5.33%	2.92%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	06-3021-9516	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-8532-3059	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	4.93%	0.2113	>0.2113	NA	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0026	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0076	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0224	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0661	21	NA	1	10	0.5000	Exact	Non-Significant Effect
		0.2113	21	NA	1	10	0.5000	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.008888889	0.001777778	5	0.8	0.5585	Non-Significant Effect
Error	0.06666667	0.002222222	30			
Total	0.07555556		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	0.8	3.7	0.5585	Equal Variances
Variances	Levene Equality of Variance	5	3.7	0.0019	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.489	0.917	<0.0001	Non-normal Distribution

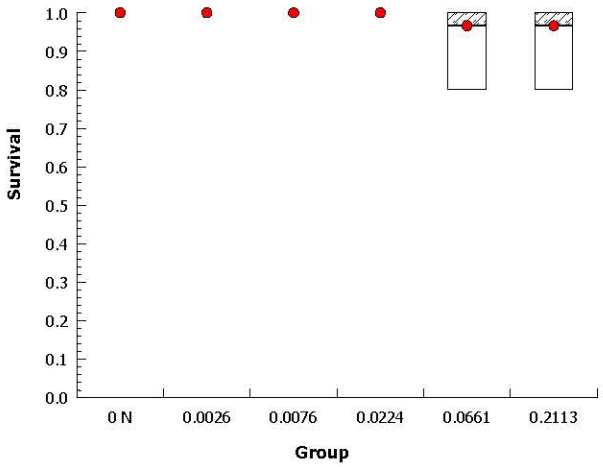
Survival Summary

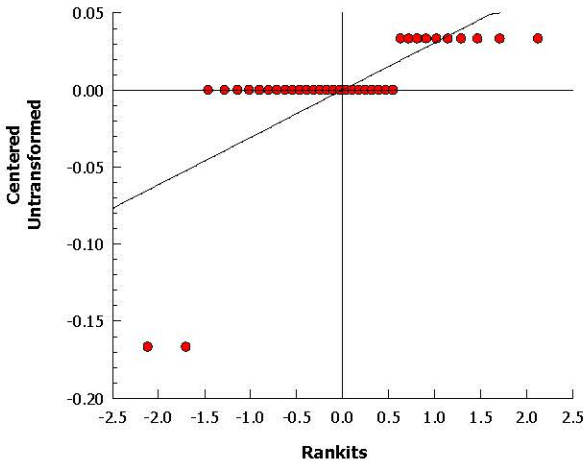
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0076		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0661		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%
0.2113		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-8532-3059	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-9307-2766	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0224	0.0661	0.03848	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0026	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0076	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0224	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0661*	1.9	1.64	1	-2	0.0288	Asymp	Significant Effect
		0.2113*	1.85	1.64	2	-2	0.0319	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.008888889	0.001777778	5	0.8	0.5585	Non-Significant Effect
Error	0.06666667	0.002222222	30			
Total	0.07555556		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	0.8	3.7	0.5585	Equal Variances
Variances	Levene Equality of Variance	5	3.7	0.0019	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.489	0.917	<0.0001	Non-normal Distribution

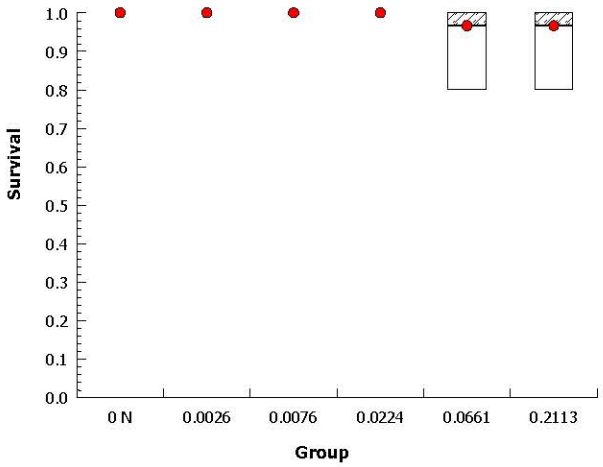
Survival Summary

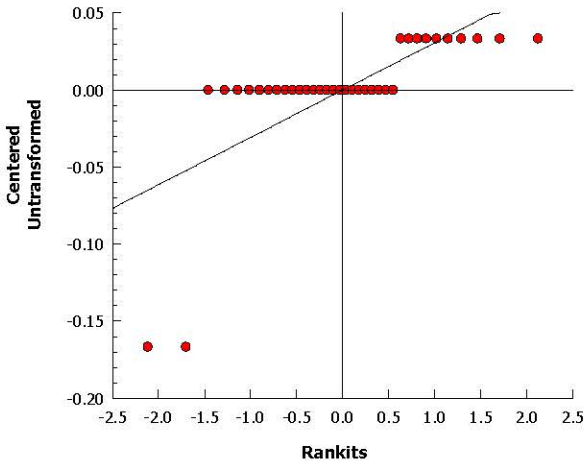
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0076		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0224		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0661		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%
0.2113		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-9307-2766	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-4802-6411	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	19.2%	0.0661	0.2113	0.1182	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0026	-0.842	2.34	0.947	10	0.9747	CDF	Non-Significant Effect
		0.0076	0.246	2.34	0.947	10	0.7503	CDF	Non-Significant Effect
		0.0224	0.616	2.34	0.947	10	0.5947	CDF	Non-Significant Effect
		0.0661	1.73	2.34	0.947	10	0.1537	CDF	Non-Significant Effect
		0.2113*	3.8	2.34	0.947	10	0.0015	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	13.28639	2.657278	5	5.38	0.0012	Significant Effect
Error	14.8129	0.4937634	30			
Total	28.09929		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.43	15.1	0.4894	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.924	0.917	0.0164	Normal Distribution

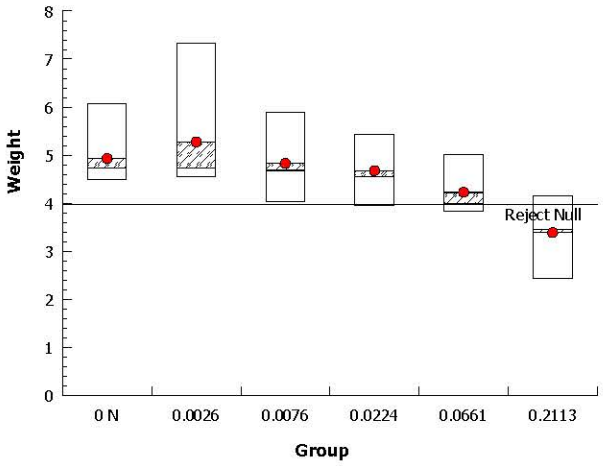
Weight Summary

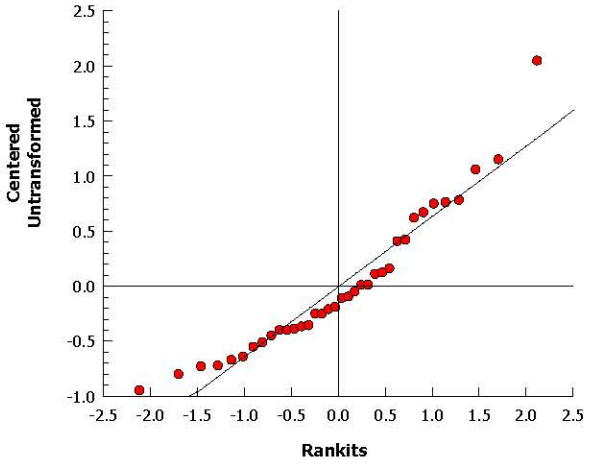
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	4.93	4.32	5.54	4.73	4.48	6.08	0.236	11.7%	0.0%
0.0026		6	5.27	4.13	6.41	4.74	4.55	7.32	0.443	20.6%	-6.93%
0.0076		6	4.83	4.05	5.61	4.68	4.03	5.89	0.305	15.5%	2.03%
0.0224		6	4.68	4.07	5.29	4.56	3.95	5.43	0.238	12.5%	5.07%
0.0661		6	4.23	3.71	4.74	4	3.84	5.01	0.201	11.7%	14.3%
0.2113		6	3.39	2.81	3.97	3.45	2.44	4.15	0.226	16.3%	31.3%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	12-4802-6411	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-8044-5477	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	15.0%	0.0661	0.2113	0.1182	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0026	-0.842	1.7	0.688	10	>0.05	CDF	Non-Significant Effect
		0.0076	0.246	1.78	0.721	10	>0.05	CDF	Non-Significant Effect
		0.0224	0.616	1.8	0.731	10	>0.05	CDF	Non-Significant Effect
		0.0661	1.73	1.81	0.736	10	>0.05	CDF	Non-Significant Effect
		0.2113*	3.8	1.82	0.739	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	13.28639	2.657278	5	5.38	0.0012	Significant Effect
Error	14.8129	0.4937634	30			
Total	28.09929		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.43	15.1	0.4894	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.924	0.917	0.0164	Normal Distribution

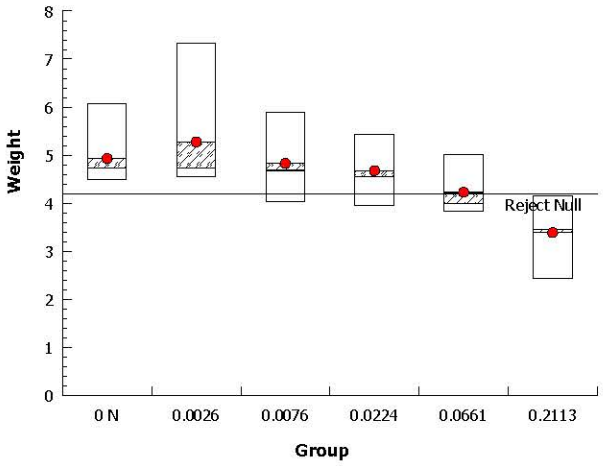
Weight Summary

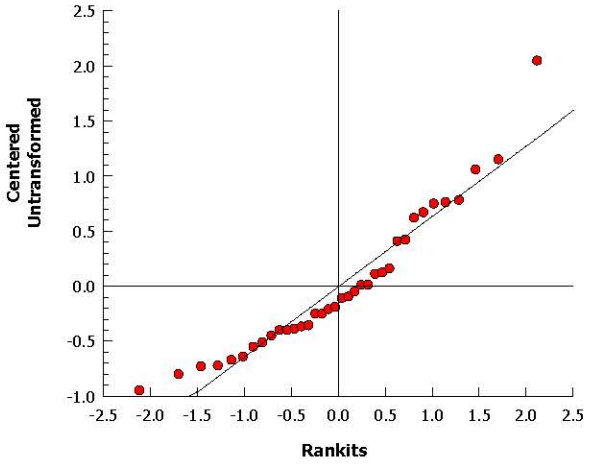
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	4.93	4.32	5.54	4.73	4.48	6.08	0.236	11.7%	0.0%
0.0026		6	5.27	4.13	6.41	4.74	4.55	7.32	0.443	20.6%	-6.93%
0.0076		6	4.83	4.05	5.61	4.68	4.03	5.89	0.305	15.5%	2.03%
0.0224		6	4.68	4.07	5.29	4.56	3.95	5.43	0.238	12.5%	5.07%
0.0661		6	4.23	3.71	4.74	4	3.84	5.01	0.201	11.7%	14.3%
0.2113		6	3.39	2.81	3.97	3.45	2.44	4.15	0.226	16.3%	31.3%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-8044-5477	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	01-0318-3640	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Linear Regression (MLE)	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Linear Regression Options

Model Function	Threshold Option	Threshold	Optimized	Pooled	Het Corr	Weighted
Log-Normal [NED=A+B*log(X)]	Control Threshold	1E-07	No	No	No	Yes

Regression Summary

Iters	LL	AICc	BIC	Mu	Sigma	Adj R2	F Stat	Critical	P-Value	Decision(α:5%)
11	-9.25	22.9	25.7	1.21	1.11	0.532	3.83	2.69	0.0124	Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
EC5	0.243	N/A	N/A
EC10	0.615	N/A	N/A
EC25	2.9	N/A	N/A
EC50	16.3	N/A	N/A

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
Slope	0.9	0.681	-0.434	2.24	1.32	0.1950	Non-Significant Parameter
Intercept	-1.09	0.746	-2.55	0.37	-1.46	0.1526	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	18.74985	18.74985	1	40.8	<0.0001	Significant
Lack of Fit	5.287341	1.321835	4	3.83	0.0124	Significant
Pure Error	10.34483	0.344828	30			
Residual	15.63217	0.45977	34			

Residual Analysis

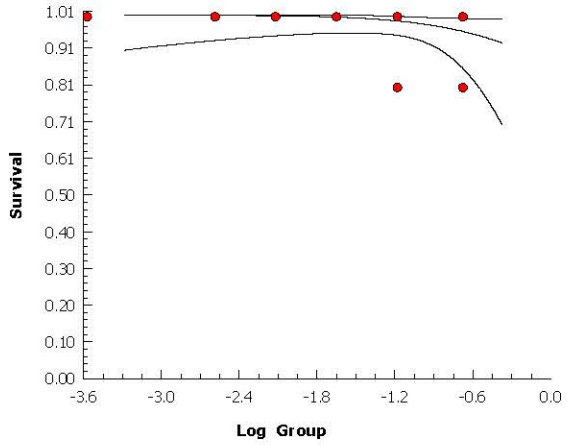
Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	15.6	48.6	0.9970	Non-Significant Heterogenity
	Likelihood Ratio GOF	8.49	48.6	1.0000	Non-Significant Heterogenity
Variances	Mod Levene Equality of Variance	0.823	2.53	0.5429	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.451	0.94	<0.0001	Non-normal Distribution
	Anderson-Darling A2 Normality	7.6	2.49	<0.0001	Non-normal Distribution

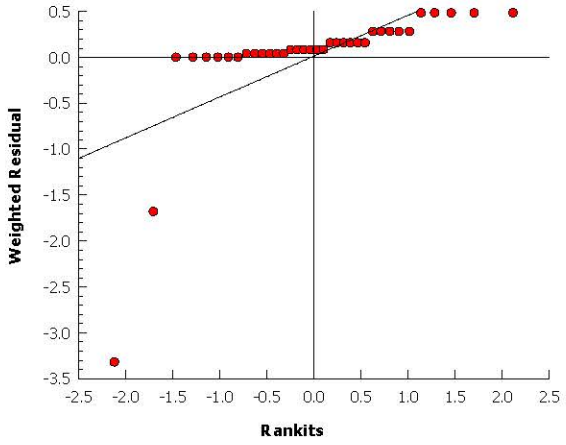
Survival Summary

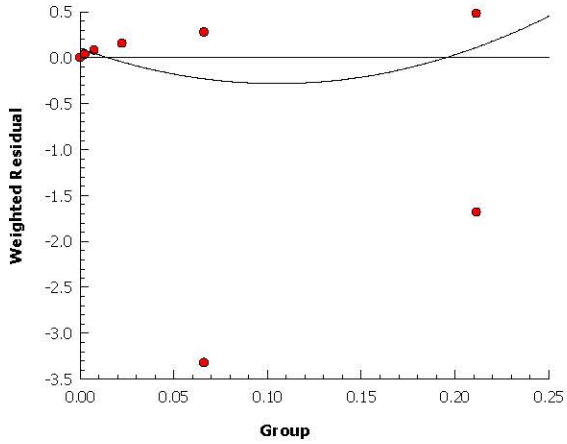
			Calculated Variate(A/B)								
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0	Negative Control	6	1	1	1	0	0	0.0%	0.0%	30	30
0.0026		6	1	1	1	0	0	0.0%	0.0%	30	30
0.0076		6	1	1	1	0	0	0.0%	0.0%	30	30
0.0224		6	1	1	1	0	0	0.0%	0.0%	30	30
0.0661		6	0.967	0.8	1	0.0333	0.0816	8.45%	3.33%	29	30
0.2113		6	0.967	0.8	1	0.0333	0.0816	8.45%	3.33%	29	30

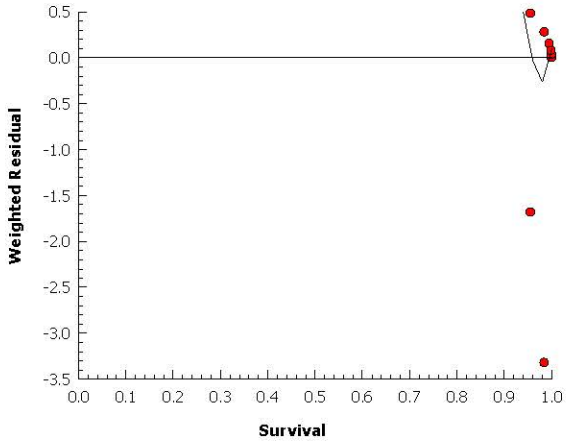
Analysis ID:	01-0318-3640	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Linear Regression (MLE)	**Official Results:**	Yes

Graphics Log-Normal [NED=A+B*log(X)]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	18-2946-4999	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
92	3220	-6440	-6430		Yes	0.333	2.92	0.8013	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	23.3	N/A	1.55E+09
IC10	9950	N/A	7E+21
IC25	24700000	N/A	N/A
IC50	18800000	N/A	N/A

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	35.6	1.04	33.6	37.7	34.1	<0.0001	Significant Parameter
C	16.7	53.5	-88.1	121	0.312	0.7572	Non-Significant Parameter
D	1.88E+13	1.97E+15	-3.9E+15	3.89E+15	0.00952	0.9925	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	0.145307	0.145307	1	0.79	0.3806	Non-Significant
Lack of Fit	0.195878	0.065293	3	0.333	0.8013	Non-Significant
Pure Error	5.876075	0.195869	30			
Residual	6.071952	0.183999	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	6.07	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	6.08	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	4.47	11.1	0.4845	Equal Variances
	Mod Levene Equality of Variance	0.819	2.53	0.5458	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.984	0.94	0.8685	Normal Distribution
	Anderson-Darling A2 Normality	0.21	2.49	0.8995	Normal Distribution

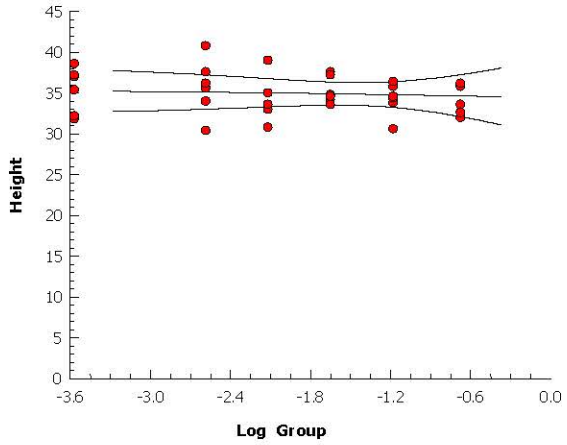
Height Summary

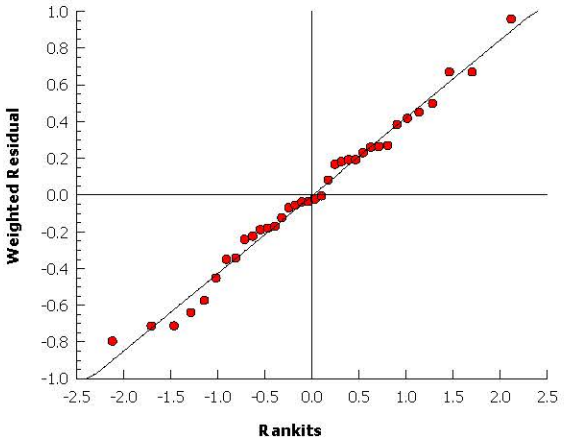
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	35.4	31.8	38.6	1.14	2.8	7.92%	0.0%
0.0026		6	35.8	30.4	40.8	1.42	3.49	9.75%	-1.13%
0.0076		6	35.1	30.8	39	1.36	3.33	9.51%	0.85%
0.0224		6	35.3	33.6	37.6	0.677	1.66	4.69%	0.09%
0.0661		6	34.3	30.6	36.4	0.831	2.03	5.94%	3.11%
0.2113		6	34.3	32	36.2	0.748	1.83	5.33%	2.92%

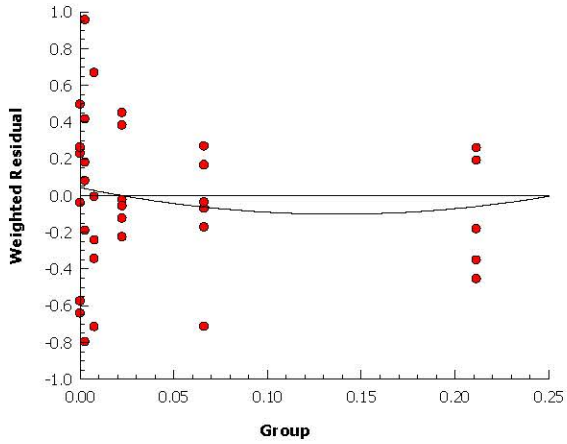
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

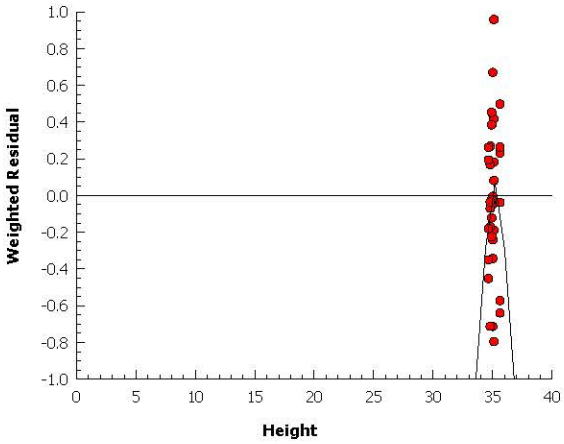
Analysis ID:	18-2946-4999	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	13-6512-8476	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	12-3918-2593	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:29	**Species:**	Brassica napus	**Brine:**	
Duration:	540d 13h	**Source:**	Seedland Inc.	**Age:**	
Sample ID:	17-5645-9864	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:29	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
9	86.1	-165	-161	0.4363	Yes	0.444	2.92	0.7235	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.0146	N/A	0.038
IC10	0.0326	0.00736	0.0701
IC25	0.125	0.0754	0.193
IC50	0.554	0.185	1.66

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	5.07	0.216	4.64	5.49	23.5	<0.0001	Significant Parameter
C	2.21	0.851	0.542	3.88	2.6	0.0139	Significant Parameter
D	0.554	0.278	0.01	1.1	2	0.0542	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	2.890727	2.890727	1	29.1	<0.0001	Significant
Lack of Fit	0.13929	0.04643	3	0.444	0.7235	Non-Significant
Pure Error	3.139625	0.104654	30			
Residual	3.278915	0.099361	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	3.28	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	3.16	47.4	1.0000	Non-Significant Heterogenity
Variances	Mod Levene Equality of Variance	0.327	2.53	0.8930	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.911	0.94	0.0069	Non-normal Distribution
	Anderson-Darling A2 Normality	1.17	2.49	0.0046	Non-normal Distribution

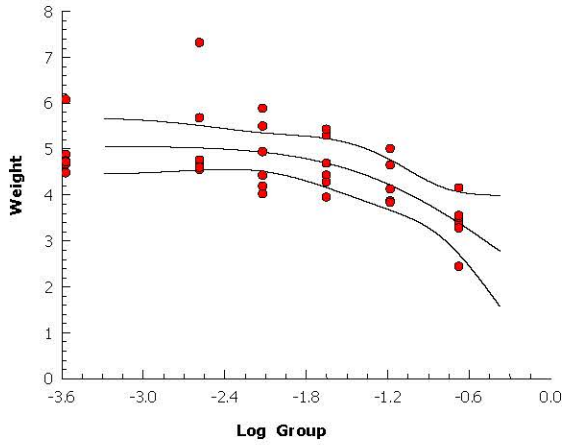
Weight Summary

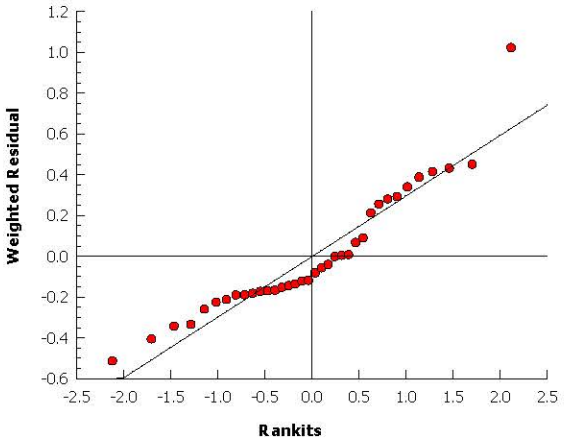
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	4.93	4.48	6.08	0.236	0.578	11.7%	0.0%
0.0026		6	5.27	4.55	7.32	0.443	1.09	20.6%	-6.93%
0.0076		6	4.83	4.03	5.89	0.305	0.748	15.5%	2.03%
0.0224		6	4.68	3.95	5.43	0.238	0.584	12.5%	5.07%
0.0661		6	4.23	3.84	5.01	0.201	0.493	11.7%	14.3%
0.2113		6	3.39	2.44	4.15	0.226	0.554	16.3%	31.3%

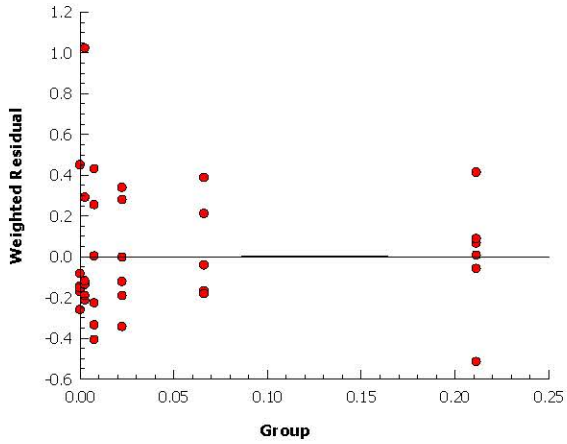
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

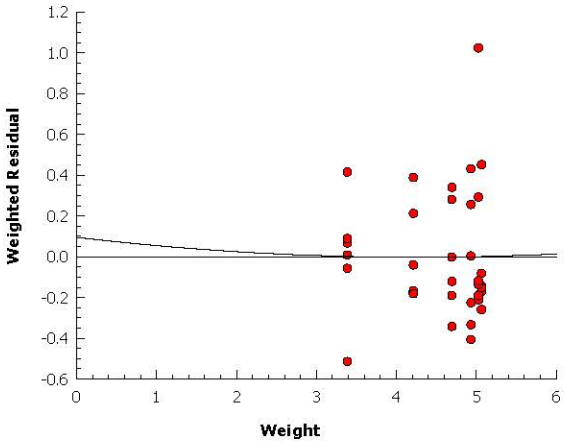
Analysis ID:	13-6512-8476	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:44	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	

Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
00-7986-9827	Height	1.9699	>1.9699	NA	8.22%		Dunnett Multiple Comparison Test
12-8824-6495	Height	0.6474	1.9699	1.129	6.41%		Williams Multiple Comparison Test
12-6089-6700	Survival	1.9699	>1.9699	NA	NA		Jonckheere-Terpstra Step-Down Test
05-0549-4412	Survival	1.9699	>1.9699	NA	3.49%		Mann-Whitney U Two-Sample Test
15-0281-3694	Weight	0.0721	0.2111	0.1234	15.0%		Dunnett Multiple Comparison Test
08-6137-3440	Weight	0.0721	0.2111	0.1234	11.7%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
18-1859-7945	Height	IC5	0.908	0.201	2.22		Nonlinear Regression
		IC10	3.57	0.167	14.5		
		IC25	35.1	N/A	2270		
		IC50	444	N/A	N/A		
12-5004-5154	Weight	IC5	0.00432	N/A	0.0696		Nonlinear Regression
		IC10	0.0462	0.00338	0.254		
		IC25	2.42	0.428	10.5		
		IC50	197	1.06	36800		

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	19.2	18.3	20.2	18.4	20.8	0.377	0.924	4.81%	0.0%
0	Negative Control	6	19.7	18.3	21.1	17.4	21	0.546	1.34	6.79%	-2.43%
0.024		6	19.7	18.1	21.4	17	21.8	0.634	1.55	7.87%	-2.6%
0.0721		6	19.5	18.7	20.3	18.4	20.4	0.296	0.724	3.71%	-1.39%
0.2111		6	18.8	17.4	20.3	17.2	20.6	0.569	1.39	7.4%	2.08%
0.6474		6	19.3	18	20.6	17.4	20.8	0.497	1.22	6.31%	-0.35%
1.9699		6	18.1	17.4	18.8	17	19	0.291	0.713	3.94%	5.89%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	0	0	0.0%	0.0%
0.6474		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	3.33%
1.9699		6	1	1	1	1	1	0	0	0.0%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	0.585	0.543	0.628	0.548	0.656	0.0166	0.0406	6.94%	0.0%
0	Negative Control	6	0.599	0.56	0.639	0.542	0.654	0.0153	0.0375	6.25%	-2.39%
0.024		6	0.564	0.485	0.643	0.466	0.65	0.0307	0.0753	13.4%	3.7%
0.0721		6	0.532	0.447	0.618	0.414	0.664	0.0331	0.0812	15.3%	9.05%
0.2111		6	0.492	0.448	0.536	0.444	0.556	0.0172	0.042	8.55%	15.9%
0.6474		6	0.497	0.401	0.594	0.368	0.624	0.0376	0.092	18.5%	15.1%
1.9699		6	0.457	0.404	0.511	0.372	0.528	0.0208	0.051	11.2%	21.9%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	18.4	18.6	19.2	20.8	18.6	19.8
0	Negative Control	20.2	21	19	20.8	17.4	19.8
0.024		20.2	21.8	19.8	19.6	20	17
0.0721		19.4	19.2	20.4	20.2	18.4	19.4
0.2111		18.4	20.6	20	19.4	17.2	17.4
0.6474		20	19	17.4	20.8	20	18.6
1.9699		18.2	17.6	19	17	18.2	18.6

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.024		1	1	1	1	1	1
0.0721		1	1	1	1	1	1
0.2111		1	1	1	1	1	1
0.6474		1	0.8	1	1	1	1
1.9699		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	0.564	0.656	0.608	0.556	0.58	0.548
0	Negative Control	0.654	0.592	0.622	0.586	0.542	0.6
0.024		0.466	0.564	0.624	0.65	0.596	0.482
0.0721		0.414	0.498	0.542	0.664	0.526	0.55
0.2111		0.444	0.556	0.526	0.458	0.484	0.484
0.6474		0.574	0.485	0.368	0.624	0.494	0.438
1.9699		0.46	0.472	0.44	0.472	0.372	0.528

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	00-7986-9827	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	8.22%	1.9699	>1.9699	NA	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	-0.0481	2.34	1.62	10	0.8472	CDF	Non-Significant Effect
		0.0721	0.288	2.34	1.62	10	0.7343	CDF	Non-Significant Effect
		0.2111	1.25	2.34	1.62	10	0.3126	CDF	Non-Significant Effect
		0.6474	0.577	2.34	1.62	10	0.6125	CDF	Non-Significant Effect
		1.9699	2.31	2.34	1.62	10	0.0530	CDF	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	11.87222	2.374443	5	1.65	0.1784	Non-Significant Effect
Error	43.28666	1.442889	30			
Total	55.15888		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.66	15.1	0.4593	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.975	0.917	0.5784	Normal Distribution

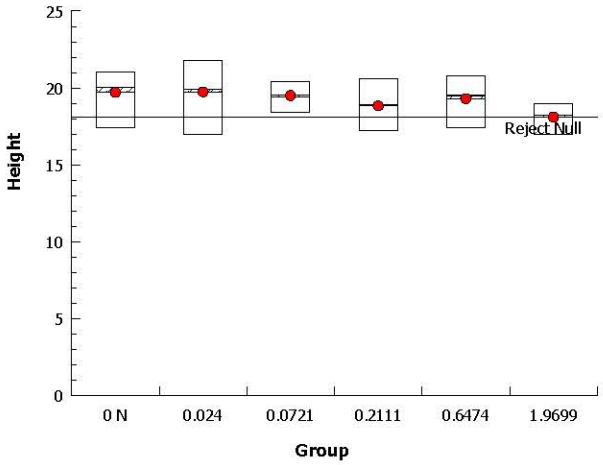
Height Summary

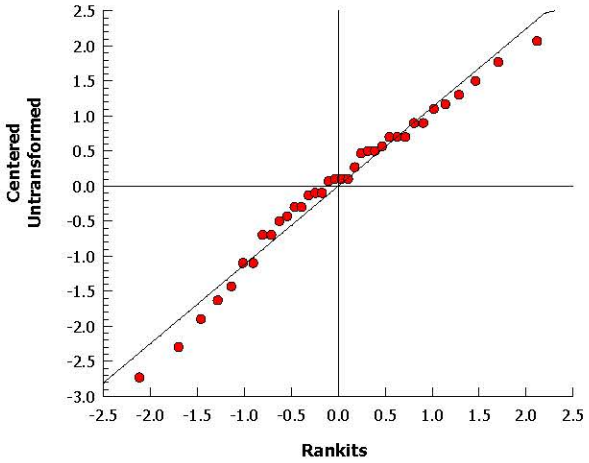
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	19.7	18.3	21.1	20	17.4	21	0.546	6.79%	0.0%
0.024		6	19.7	18.1	21.4	19.9	17	21.8	0.634	7.87%	-0.17%
0.0721		6	19.5	18.7	20.3	19.4	18.4	20.4	0.296	3.71%	1.02%
0.2111		6	18.8	17.4	20.3	18.9	17.2	20.6	0.569	7.4%	4.4%
0.6474		6	19.3	18	20.6	19.5	17.4	20.8	0.497	6.31%	2.03%
1.9699		6	18.1	17.4	18.8	18.2	17	19	0.291	3.94%	8.12%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	00-7986-9827	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-8824-6495	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	6.41%	0.6474	1.9699	1.129	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	-0.0481	1.7	1.18	10	>0.05	CDF	Non-Significant Effect
		0.0721	0.288	1.78	1.23	10	>0.05	CDF	Non-Significant Effect
		0.2111	1.25	1.8	1.25	10	>0.05	CDF	Non-Significant Effect
		0.6474	0.913	1.81	1.26	10	>0.05	CDF	Non-Significant Effect
		1.9699*	2.31	1.82	1.26	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	11.87222	2.374443	5	1.65	0.1784	Non-Significant Effect
Error	43.28666	1.442889	30			
Total	55.15888		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.66	15.1	0.4593	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.975	0.917	0.5784	Normal Distribution

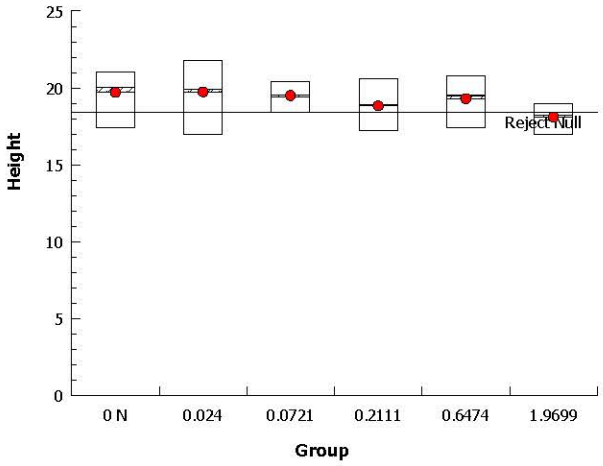
Height Summary

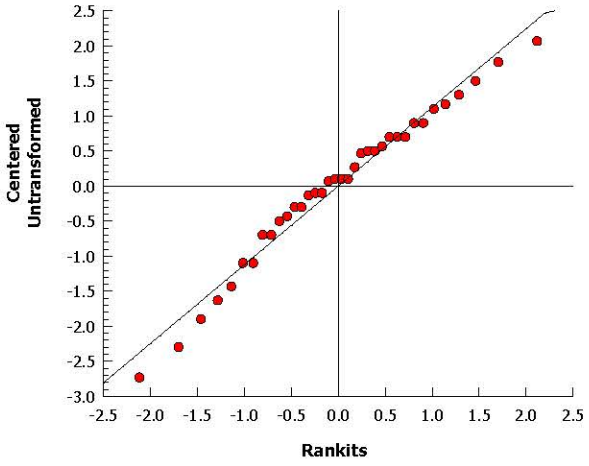
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	19.7	18.3	21.1	20	17.4	21	0.546	6.79%	0.0%
0.024		6	19.7	18.1	21.4	19.9	17	21.8	0.634	7.87%	-0.17%
0.0721		6	19.5	18.7	20.3	19.4	18.4	20.4	0.296	3.71%	1.02%
0.2111		6	18.8	17.4	20.3	18.9	17.2	20.6	0.569	7.4%	4.4%
0.6474		6	19.3	18	20.6	19.5	17.4	20.8	0.497	6.31%	2.03%
1.9699		6	18.1	17.4	18.8	18.2	17	19	0.291	3.94%	8.12%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-8824-6495	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	05-0549-4412	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	3.49%	1.9699	>1.9699	NA	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0721	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.2111	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.6474	21	NA	1	10	0.5000	Exact	Non-Significant Effect
		1.9699	18	NA	1	10	1.0000	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.005555556	0.001111111	5	1	0.4346	Non-Significant Effect
Error	0.03333334	0.001111111	30			
Total	0.03888889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	1	3.7	0.4346	Equal Variances
Variances	Levene Equality of Variance	6.25	3.7	0.0004	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.362	0.917	<0.0001	Non-normal Distribution

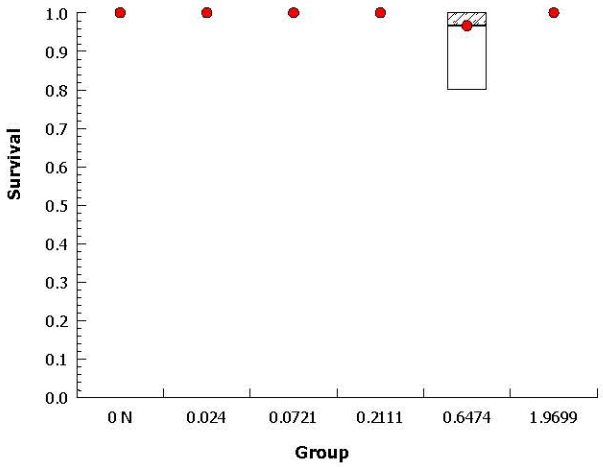
Survival Summary

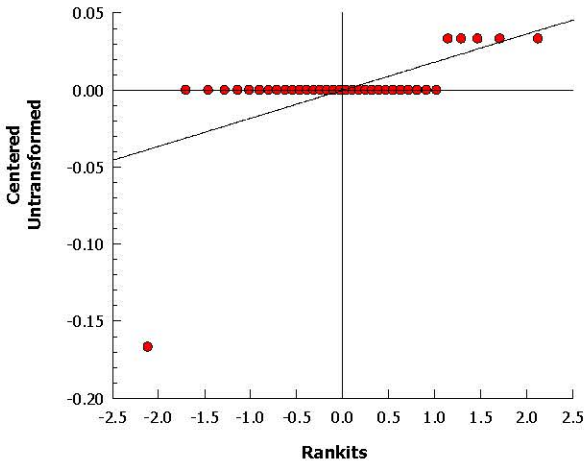
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%
1.9699		6	1	1	1	1	1	1	0	0.0%	0.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	05-0549-4412	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-6089-6700	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	1.9699	>1.9699	NA	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0721	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.2111	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.6474	1.9	1.64	1	-2	0.1339	Asymp	Non-Significant Effect
		1.9699	1.11	1.64	1	-2	0.1339	Asymp	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.005555556	0.001111111	5	1	0.4346	Non-Significant Effect
Error	0.03333334	0.001111111	30			
Total	0.03888889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	1	3.7	0.4346	Equal Variances
Variances	Levene Equality of Variance	6.25	3.7	0.0004	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.362	0.917	<0.0001	Non-normal Distribution

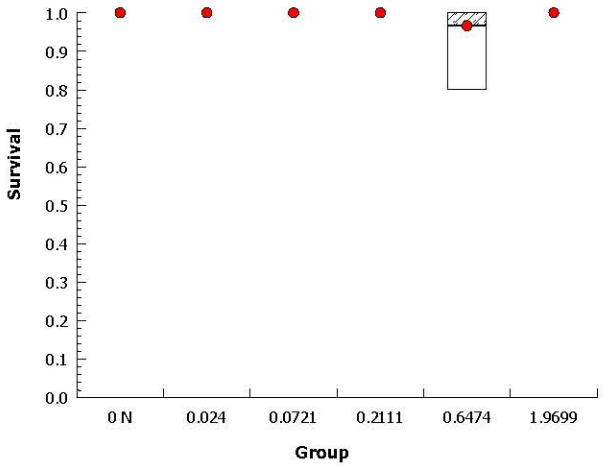
Survival Summary

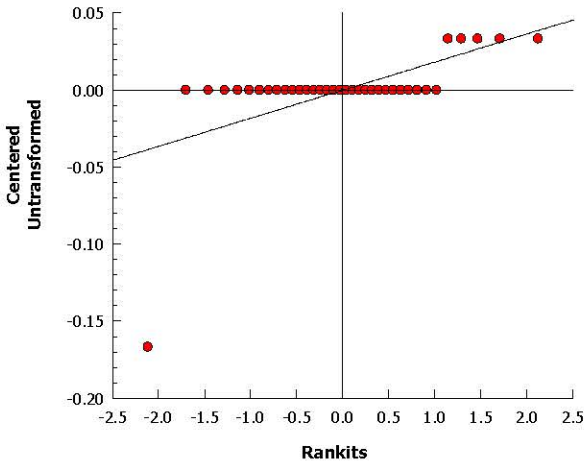
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%
1.9699		6	1	1	1	1	1	1	0	0.0%	0.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-6089-6700	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-0281-3694	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	15.0%	0.0721	0.2111	0.1234	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	0.929	2.34	0.09	10	0.4506	CDF	Non-Significant Effect
		0.0721	1.75	2.34	0.09	10	0.1505	CDF	Non-Significant Effect
		0.2111*	2.8	2.34	0.09	10	0.0182	CDF	Significant Effect
		0.6474*	2.66	2.34	0.09	10	0.0247	CDF	Significant Effect
		1.9699*	3.7	2.34	0.09	10	0.0019	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.08103414	0.01620683	5	3.67	0.0104	Significant Effect
Error	0.1325182	0.004417272	30			
Total	0.2135523		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.98	15.1	0.3077	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.979	0.917	0.7082	Normal Distribution

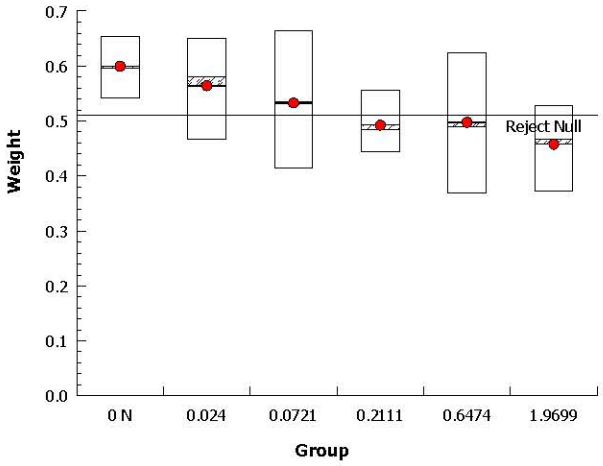
Weight Summary

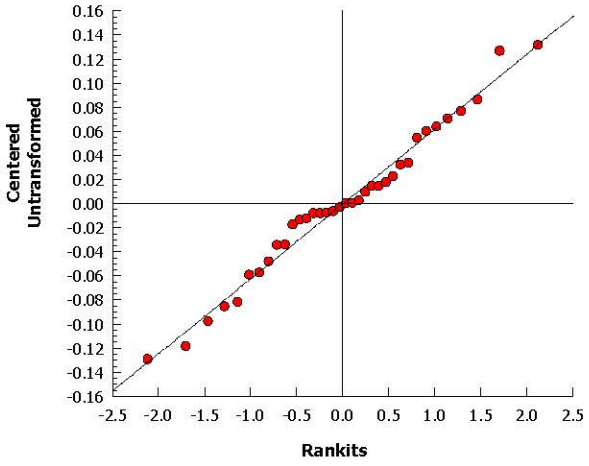
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	0.599	0.56	0.639	0.596	0.542	0.654	0.0153	6.25%	0.0%
0.024		6	0.564	0.485	0.643	0.58	0.466	0.65	0.0307	13.4%	5.95%
0.0721		6	0.532	0.447	0.618	0.534	0.414	0.664	0.0331	15.3%	11.2%
0.2111		6	0.492	0.448	0.536	0.484	0.444	0.556	0.0172	8.55%	17.9%
0.6474		6	0.497	0.401	0.594	0.489	0.368	0.624	0.0376	18.5%	17.0%
1.9699		6	0.457	0.404	0.511	0.466	0.372	0.528	0.0208	11.2%	23.7%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-0281-3694	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	08-6137-3440	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	11.7%	0.0721	0.2111	0.1234	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	0.929	1.7	0.065	10	>0.05	CDF	Non-Significant Effect
		0.0721	1.75	1.78	0.068	10	>0.05	CDF	Non-Significant Effect
		0.2111*	2.8	1.8	0.069	10	<0.05	CDF	Significant Effect
		0.6474*	2.73	1.81	0.07	10	<0.05	CDF	Significant Effect
		1.9699*	3.7	1.82	0.07	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.08103414	0.01620683	5	3.67	0.0104	Significant Effect
Error	0.1325182	0.004417272	30			
Total	0.2135523		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.98	15.1	0.3077	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.979	0.917	0.7082	Normal Distribution

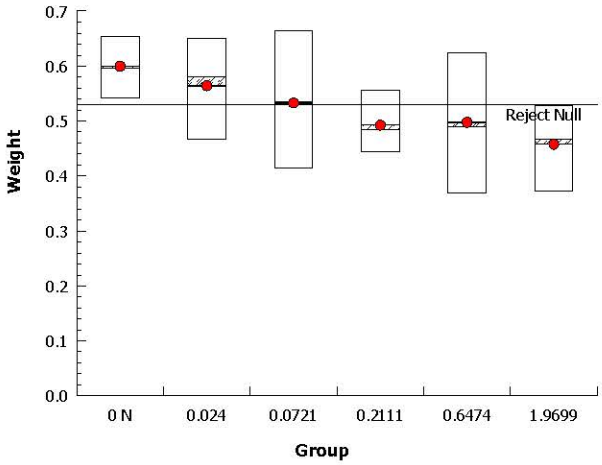
Weight Summary

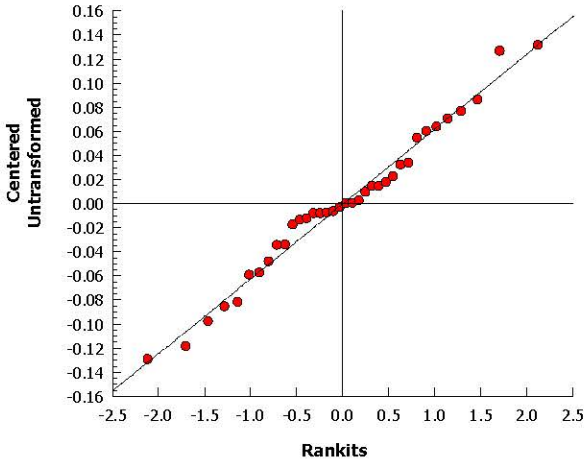
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	0.599	0.56	0.639	0.596	0.542	0.654	0.0153	6.25%	0.0%
0.024		6	0.564	0.485	0.643	0.58	0.466	0.65	0.0307	13.4%	5.95%
0.0721		6	0.532	0.447	0.618	0.534	0.414	0.664	0.0331	15.3%	11.2%
0.2111		6	0.492	0.448	0.536	0.484	0.444	0.556	0.0172	8.55%	17.9%
0.6474		6	0.497	0.401	0.594	0.489	0.368	0.624	0.0376	18.5%	17.0%
1.9699		6	0.457	0.404	0.511	0.466	0.372	0.528	0.0208	11.2%	23.7%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	08-6137-3440	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	18-1859-7945	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
51	1350	-2700	-2690	0.1263	Yes	0.57	2.92	0.6389	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.908	0.201	2.22
IC10	3.57	0.167	14.5
IC25	35.1	N/A	2270
IC50	444	N/A	N/A

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	19.7	0.413	18.9	20.5	47.7	<0.0001	Significant Parameter
C	3.77	3.13	-2.36	9.9	1.2	0.2372	Non-Significant Parameter
D	444	1990	-3460	4350	0.223	0.8247	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	0.506460	0.506460	1	7.06	0.0121	Significant
Lack of Fit	0.127713	0.042571	3	0.57	0.6389	Non-Significant
Pure Error	2.239516	0.074651	30			
Residual	2.36723	0.071734	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	2.37	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	2.39	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	4.45	11.1	0.4865	Equal Variances
	Mod Levene Equality of Variance	0.799	2.53	0.5594	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.968	0.94	0.3753	Normal Distribution
	Anderson-Darling A2 Normality	0.489	2.49	0.2261	Normal Distribution

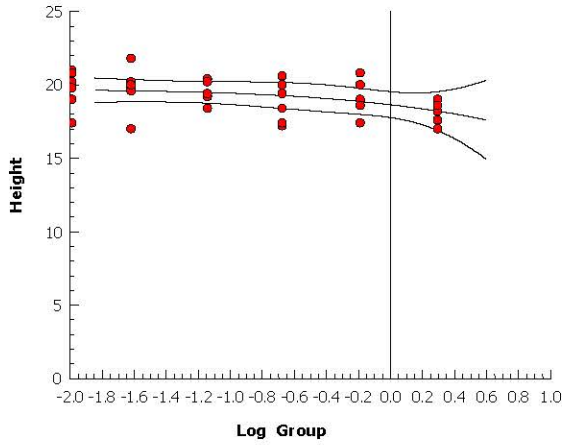
Height Summary

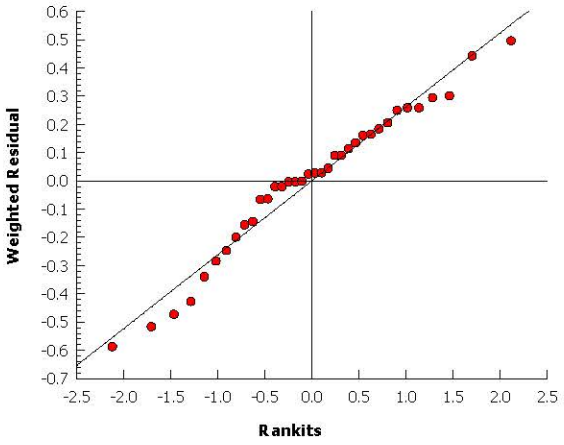
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	19.7	17.4	21	0.546	1.34	6.79%	0.0%
0.024		6	19.7	17	21.8	0.634	1.55	7.87%	-0.17%
0.0721		6	19.5	18.4	20.4	0.296	0.724	3.71%	1.02%
0.2111		6	18.8	17.2	20.6	0.569	1.39	7.4%	4.4%
0.6474		6	19.3	17.4	20.8	0.497	1.22	6.31%	2.03%
1.9699		6	18.1	17	19	0.291	0.713	3.94%	8.12%

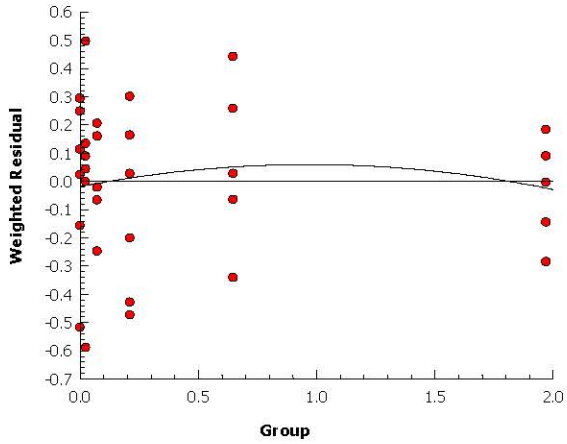
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

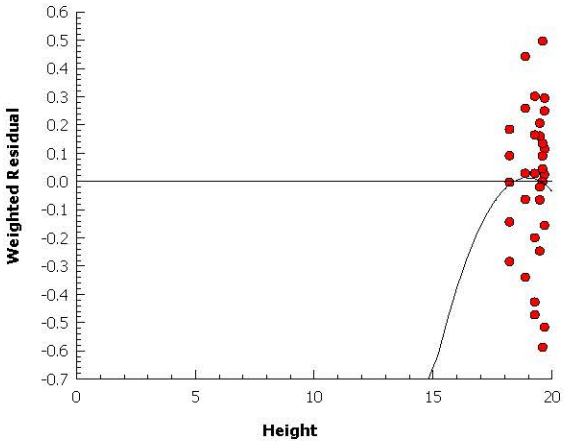
Analysis ID:	18-1859-7945	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:48	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	12-5004-5154	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:47	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	21-1587-7874	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:30	**Species:**	Lolium perenne	**Brine:**	
Duration:	516d 16h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	06-0065-2615	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:30	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
7	-31	68.7	72.7	0.3088	Yes	0.402	2.92	0.7526	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.00432	N/A	0.0696
IC10	0.0462	0.00338	0.254
IC25	2.42	0.428	10.5
IC50	197	1.06	36800

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	0.601	0.0282	0.546	0.656	21.3	<0.0001	Significant Parameter
C	6.52	2.83	0.975	12.1	2.3	0.0276	Significant Parameter
D	197	459	-702	1100	0.43	0.6701	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	0.142055	0.142055	1	17.6	0.0002	Significant
Lack of Fit	0.010270	0.003423	3	0.402	0.7526	Non-Significant
Pure Error	0.255499	0.008517	30			
Residual	0.265769	0.008054	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	0.266	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	0.265	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	6.37	11.1	0.2716	Equal Variances
	Mod Levene Equality of Variance	1.01	2.53	0.4295	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.981	0.94	0.7630	Normal Distribution
	Anderson-Darling A2 Normality	0.307	2.49	0.5911	Normal Distribution

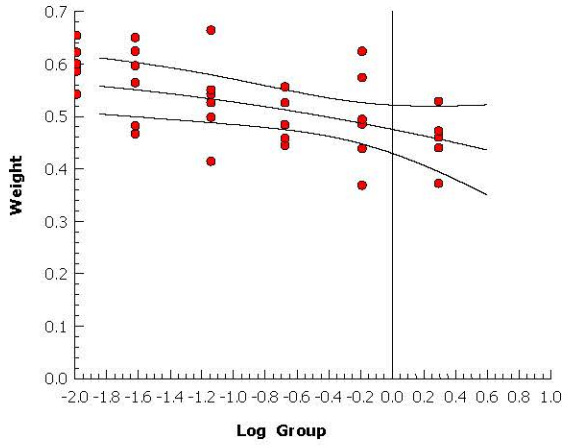
Weight Summary

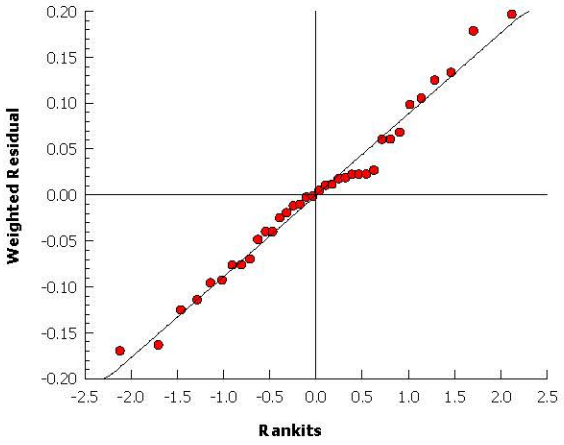
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	0.599	0.542	0.654	0.0153	0.0375	6.25%	0.0%
0.024		6	0.564	0.466	0.65	0.0307	0.0753	13.4%	5.95%
0.0721		6	0.532	0.414	0.664	0.0331	0.0812	15.3%	11.2%
0.2111		6	0.492	0.444	0.556	0.0172	0.042	8.55%	17.9%
0.6474		6	0.497	0.368	0.624	0.0376	0.092	18.5%	17.0%
1.9699		6	0.457	0.372	0.528	0.0208	0.051	11.2%	23.7%

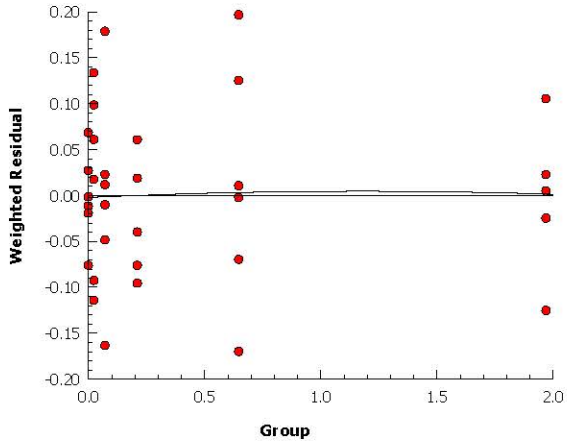
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

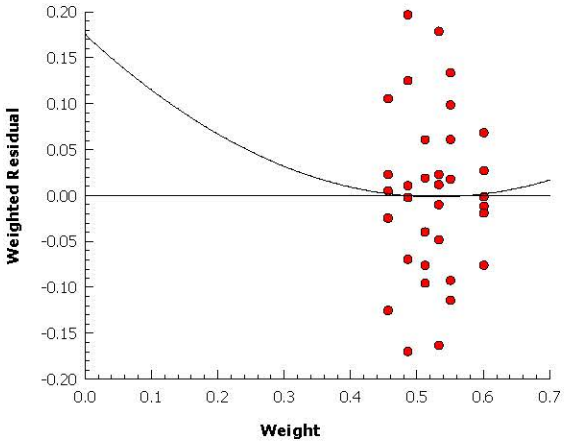
Analysis ID:	12-5004-5154	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:47	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	21-2408-1449	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	
Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	5.48%	0.0003	0.0009	0.0005196	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0001	1.26	2.38	2.52	10	0.3355	CDF	Non-Significant Effect
		0.0003	2.08	2.38	2.52	10	0.0917	CDF	Non-Significant Effect
		0.0009*	12.1	2.38	2.52	10	<0.0001	CDF	Significant Effect
		0.0026*	17.4	2.38	2.52	10	<0.0001	CDF	Significant Effect
		0.0082*	23.9	2.38	2.52	10	<0.0001	CDF	Significant Effect
		0.0245*	29.4	2.38	2.52	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5557.586	926.2645	6	276	<0.0001	Significant Effect
Error	117.2667	3.350476	35			
Total	5674.853		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.86	16.8	0.5614	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.962	0.927	0.1676	Normal Distribution

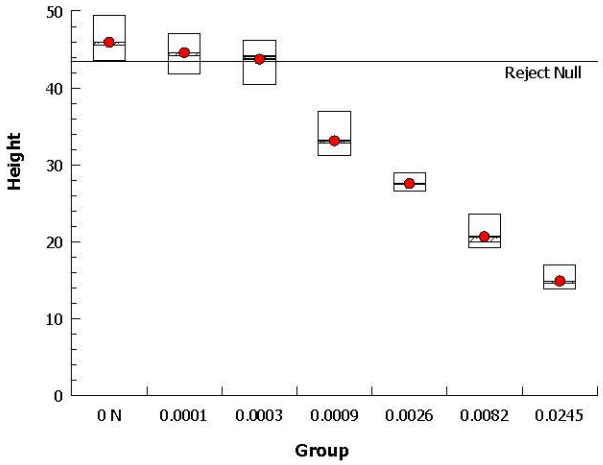
Height Summary

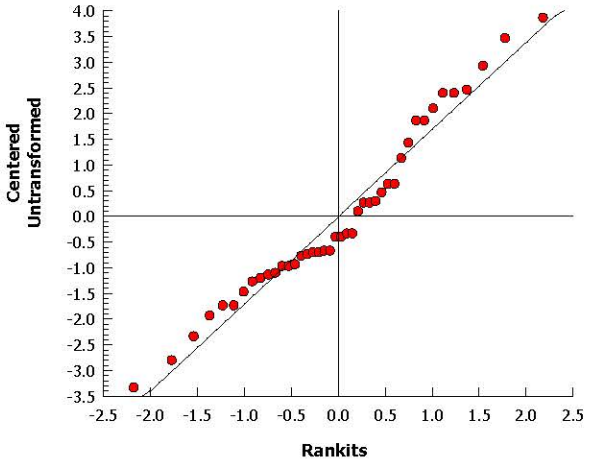
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	45.9	43.9	47.9	45.6	43.6	49.4	0.781	4.16%	0.0%
0.0001		6	44.6	42.4	46.8	44.2	41.8	47	0.839	4.61%	2.9%
0.0003		6	43.7	41.2	46.2	44.1	40.4	46.2	0.974	5.45%	4.79%
0.0009		6	33.1	30.9	35.4	32.8	31.2	37	0.873	6.45%	27.9%
0.0026		6	27.6	26.5	28.6	27.5	26.6	29	0.421	3.74%	40.0%
0.0082		6	20.7	18.9	22.5	20	19.2	23.6	0.696	8.25%	55.0%
0.0245		6	14.9	13.7	16.1	14.6	13.8	17	0.473	7.77%	67.6%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	21-2408-1449	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-7088-0458	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	
Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	4.18%	0.0001	0.0003	0.0001732	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0001	1.26	1.69	1.79	10	>0.05	CDF	Non-Significant Effect
		0.0003*	2.08	1.77	1.87	10	<0.05	CDF	Significant Effect
		0.0009*	12.1	1.79	1.89	10	<0.05	CDF	Significant Effect
		0.0026*	17.4	1.8	1.91	10	<0.05	CDF	Significant Effect
		0.0082*	23.9	1.81	1.91	10	<0.05	CDF	Significant Effect
		0.0245*	29.4	1.82	1.92	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	5557.586	926.2645	6	276	<0.0001	Significant Effect
Error	117.2667	3.350476	35			
Total	5674.853		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	4.86	16.8	0.5614	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.962	0.927	0.1676	Normal Distribution

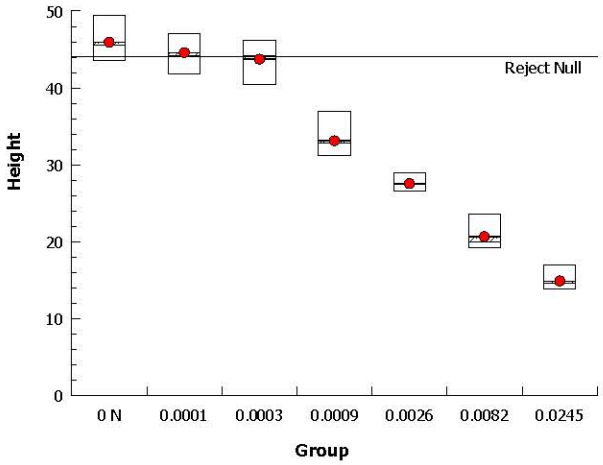
Height Summary

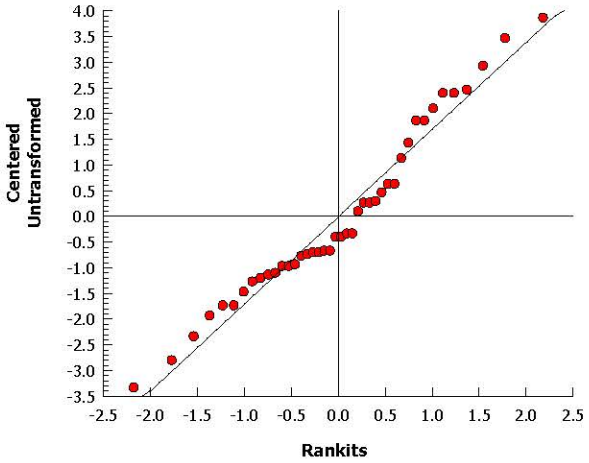
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	45.9	43.9	47.9	45.6	43.6	49.4	0.781	4.16%	0.0%
0.0001		6	44.6	42.4	46.8	44.2	41.8	47	0.839	4.61%	2.9%
0.0003		6	43.7	41.2	46.2	44.1	40.4	46.2	0.974	5.45%	4.79%
0.0009		6	33.1	30.9	35.4	32.8	31.2	37	0.873	6.45%	27.9%
0.0026		6	27.6	26.5	28.6	27.5	26.6	29	0.421	3.74%	40.0%
0.0082		6	20.7	18.9	22.5	20	19.2	23.6	0.696	8.25%	55.0%
0.0245		6	14.9	13.7	16.1	14.6	13.8	17	0.473	7.77%	67.6%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-7088-0458	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	08-0392-2524	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	
Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0245	>0.0245	NA	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0001	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0003	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0009	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0026	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0082	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0245	18	NA	1	10	1.0000	Exact	Non-Significant Effect

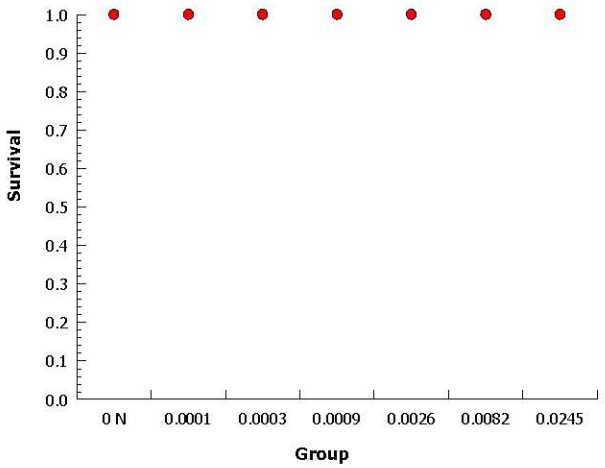
ANOVA Table

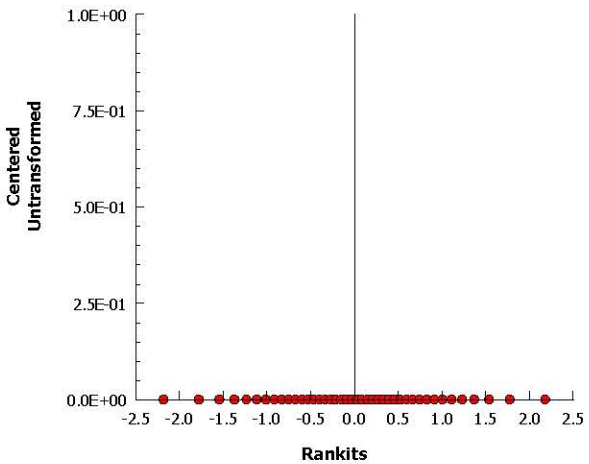
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	6	65500	<0.0001	Significant Effect
Error	0	0	35			
Total	0		41			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0001		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0009		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0245		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	04-3972-7164	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	
Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0245	>0.0245	NA	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0001	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0003	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0009	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0026	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0082	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0245	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect

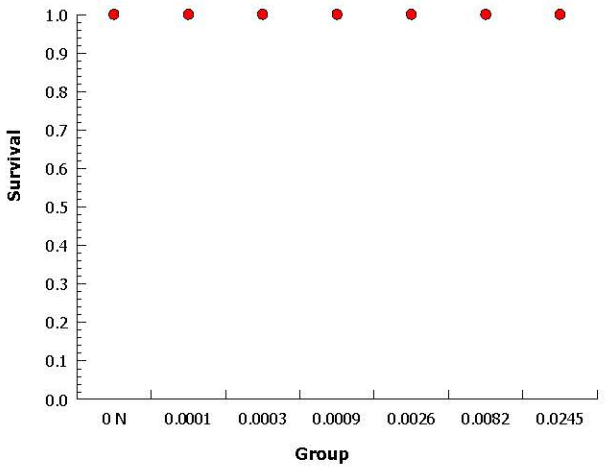
ANOVA Table

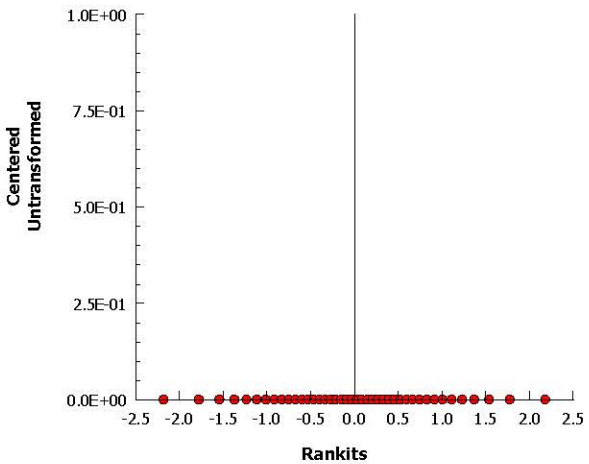
Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0	0	6	65500	<0.0001	Significant Effect
Error	0	0	35			
Total	0		41			

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.0001		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0009		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0245		6	1	1	1	1	1	1	0	0.0%	0.0%

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	07-0868-8781	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	
Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	7.75%	<0.0001	0.0001	NA	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0001*	3.83	2.38	0.404	10	0.0013	CDF	Significant Effect
		0.0003*	5.93	2.38	0.404	10	<0.0001	CDF	Significant Effect
		0.0009*	6.13	2.38	0.404	10	<0.0001	CDF	Significant Effect
		0.0026*	10.6	2.38	0.404	10	<0.0001	CDF	Significant Effect
		0.0082*	13.2	2.38	0.404	10	<0.0001	CDF	Significant Effect
		0.0245*	19.3	2.38	0.404	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	42.96946	7.161576	6	83.1	<0.0001	Significant Effect
Error	3.0168	0.0861943	35			
Total	45.98626		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	8.79	16.8	0.1856	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.989	0.927	0.9435	Normal Distribution

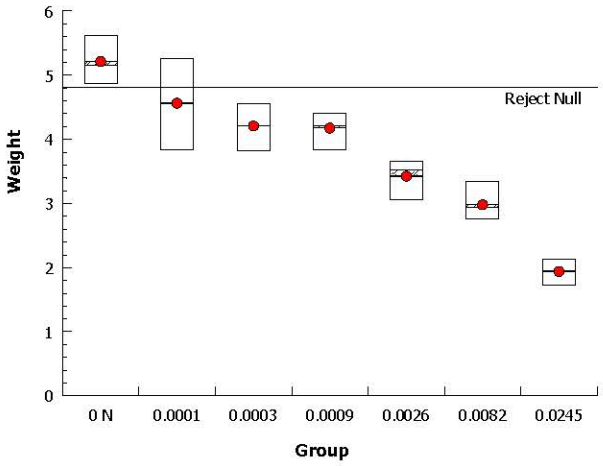
Weight Summary

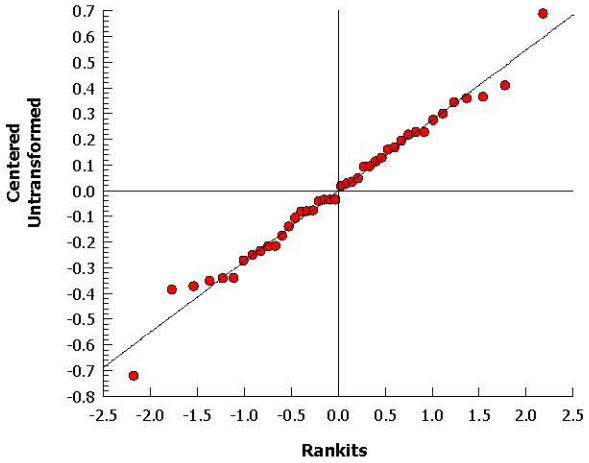
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	5.21	4.9	5.52	5.15	4.87	5.62	0.122	5.72%	0.0%
0.0001		6	4.56	4.03	5.09	4.57	3.84	5.25	0.208	11.1%	12.5%
0.0003		6	4.21	3.91	4.5	4.2	3.82	4.55	0.116	6.73%	19.3%
0.0009		6	4.17	3.96	4.38	4.2	3.83	4.4	0.0806	4.73%	19.9%
0.0026		6	3.42	3.15	3.7	3.52	3.05	3.65	0.107	7.63%	34.3%
0.0082		6	2.97	2.75	3.2	2.94	2.76	3.34	0.0859	7.08%	42.9%
0.0245		6	1.94	1.77	2.1	1.94	1.72	2.13	0.0641	8.1%	62.8%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	07-0868-8781	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-0848-9647	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	
Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	5.91%	<0.0001	0.0001	NA	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.0001*	3.83	1.69	0.286	10	<0.05	CDF	Significant Effect
		0.0003*	5.93	1.77	0.3	10	<0.05	CDF	Significant Effect
		0.0009*	6.13	1.79	0.304	10	<0.05	CDF	Significant Effect
		0.0026*	10.6	1.8	0.306	10	<0.05	CDF	Significant Effect
		0.0082*	13.2	1.81	0.307	10	<0.05	CDF	Significant Effect
		0.0245*	19.3	1.82	0.308	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	42.96946	7.161576	6	83.1	<0.0001	Significant Effect
Error	3.0168	0.0861943	35			
Total	45.98626		41			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	8.79	16.8	0.1856	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.989	0.927	0.9435	Normal Distribution

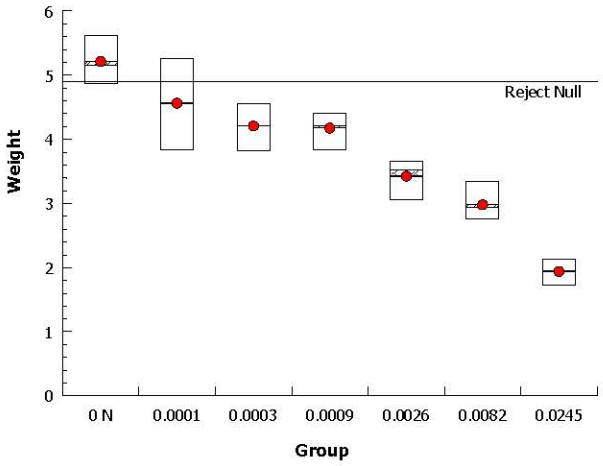
Weight Summary

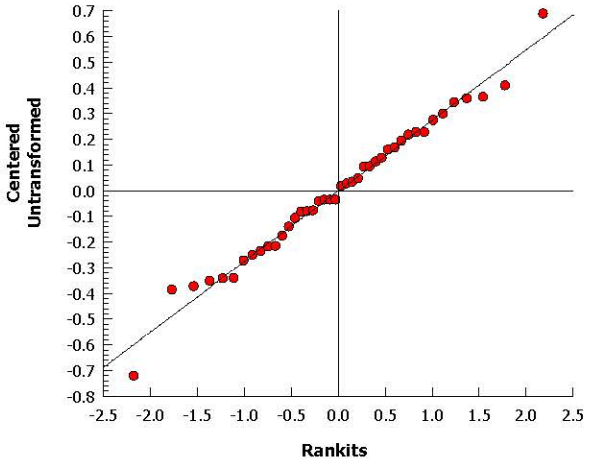
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	5.21	4.9	5.52	5.15	4.87	5.62	0.122	5.72%	0.0%
0.0001		6	4.56	4.03	5.09	4.57	3.84	5.25	0.208	11.1%	12.5%
0.0003		6	4.21	3.91	4.5	4.2	3.82	4.55	0.116	6.73%	19.3%
0.0009		6	4.17	3.96	4.38	4.2	3.83	4.4	0.0806	4.73%	19.9%
0.0026		6	3.42	3.15	3.7	3.52	3.05	3.65	0.107	7.63%	34.3%
0.0082		6	2.97	2.75	3.2	2.94	2.76	3.34	0.0859	7.08%	42.9%
0.0245		6	1.94	1.77	2.1	1.94	1.72	2.13	0.0641	8.1%	62.8%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	16-0848-9647	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-4390-5979	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	
Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
7	3540	-7070	-7070	0.9576	Yes	8.32	2.64	0.0001	Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.0000537	1.97E-05	0.0001
IC10	0.000149	9.75E-05	0.000214
IC25	0.000826	0.000664	0.00102
IC50	0.00552	0.00485	0.00627

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	47.4	1.07	45.3	49.5	44.3	<0.0001	Significant Parameter
C	2.82	0.166	2.49	3.14	16.9	<0.0001	Significant Parameter
D	0.00552	0.000632	0.00428	0.00676	8.73	<0.0001	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	165.3707	165.3707	1	929	<0.0001	Significant
Lack of Fit	3.384928	0.846232	4	8.32	<0.0001	Significant
Pure Error	3.557784	0.101651	35			
Residual	6.942712	0.178018	39			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	6.94	54.6	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	6.85	54.6	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	2.6	12.6	0.8576	Equal Variances
	Mod Levene Equality of Variance	0.435	2.37	0.8503	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.952	0.947	0.0743	Normal Distribution
	Anderson-Darling A2 Normality	0.689	2.49	0.0722	Normal Distribution

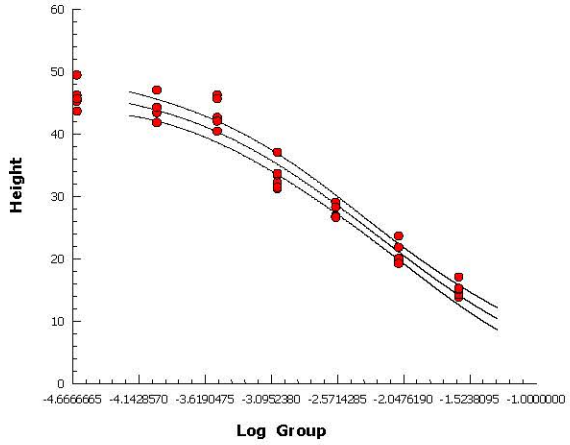
Height Summary

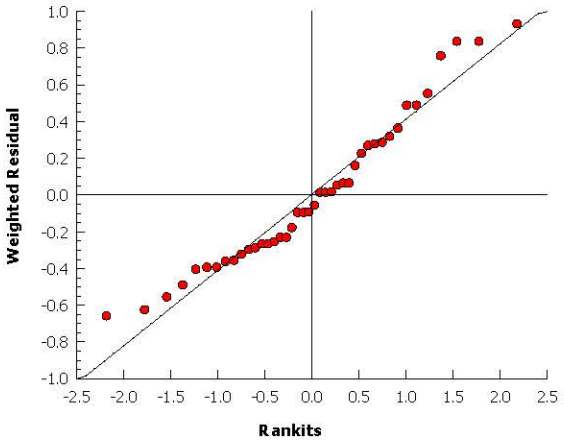
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	45.9	43.6	49.4	0.781	1.91	4.16%	0.0%
0.0001		6	44.6	41.8	47	0.839	2.06	4.61%	2.9%
0.0003		6	43.7	40.4	46.2	0.974	2.39	5.45%	4.79%
0.0009		6	33.1	31.2	37	0.873	2.14	6.45%	27.9%
0.0026		6	27.6	26.6	29	0.421	1.03	3.74%	40.0%
0.0082		6	20.7	19.2	23.6	0.696	1.7	8.25%	55.0%
0.0245		6	14.9	13.8	17	0.473	1.16	7.77%	67.6%

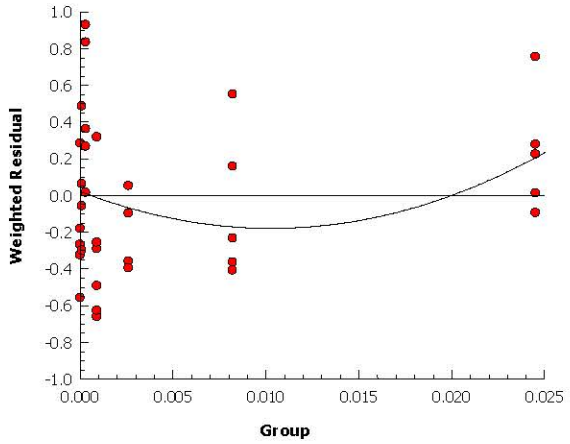
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

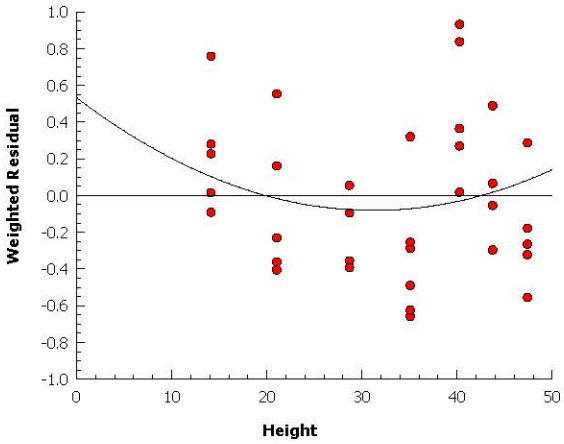
Analysis ID:	19-4390-5979	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	03-1477-9420	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	
Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
10	58.5	-110	-106	0.9078	Yes	3.72	2.64	0.0126	Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.0000617	1.51E-05	0.000137
IC10	0.000197	0.000109	0.000317
IC25	0.00137	0.00102	0.00181
IC50	0.0119	0.00965	0.0146

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	5.06	0.138	4.79	5.33	36.6	<0.0001	Significant Parameter
C	3.2	0.29	2.63	3.77	11	<0.0001	Significant Parameter
D	0.0119	0.00183	0.00827	0.0154	6.48	<0.0001	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	11.0903	11.0903	1	406	<0.0001	Significant
Lack of Fit	0.318038	0.07951	4	3.72	0.0126	Significant
Pure Error	0.748148	0.021376	35			
Residual	1.066186	0.027338	39			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	1.07	54.6	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	1.08	54.6	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	5.01	12.6	0.5428	Equal Variances
	Mod Levene Equality of Variance	1.25	2.37	0.3064	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.986	0.947	0.8828	Normal Distribution
	Anderson-Darling A2 Normality	0.309	2.49	0.5857	Normal Distribution

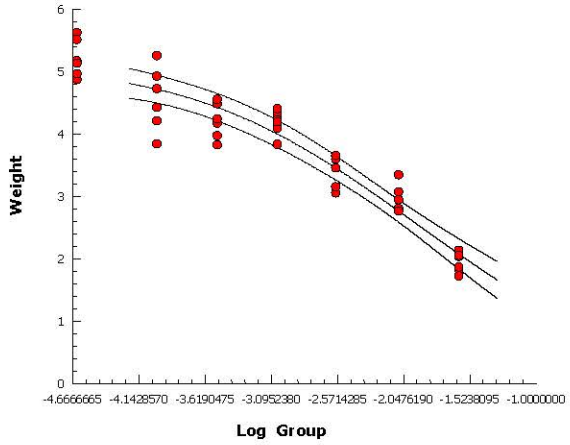
Weight Summary

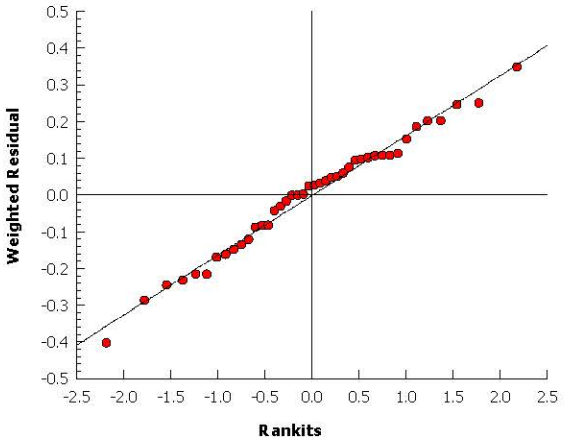
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	5.21	4.87	5.62	0.122	0.298	5.72%	0.0%
0.0001		6	4.56	3.84	5.25	0.208	0.508	11.1%	12.5%
0.0003		6	4.21	3.82	4.55	0.116	0.283	6.73%	19.3%
0.0009		6	4.17	3.83	4.4	0.0806	0.197	4.73%	19.9%
0.0026		6	3.42	3.05	3.65	0.107	0.261	7.63%	34.3%
0.0082		6	2.97	2.76	3.34	0.0859	0.21	7.08%	42.9%
0.0245		6	1.94	1.72	2.13	0.0641	0.157	8.1%	62.8%

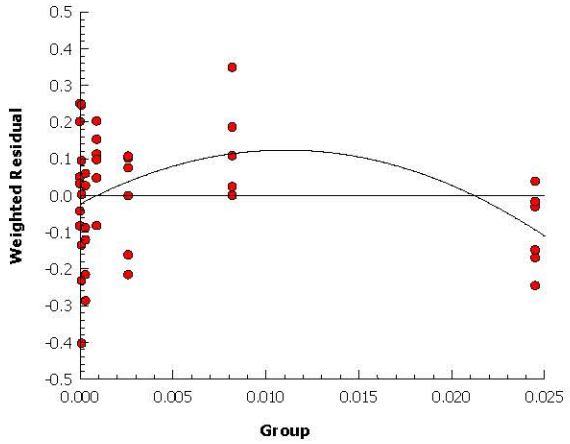
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

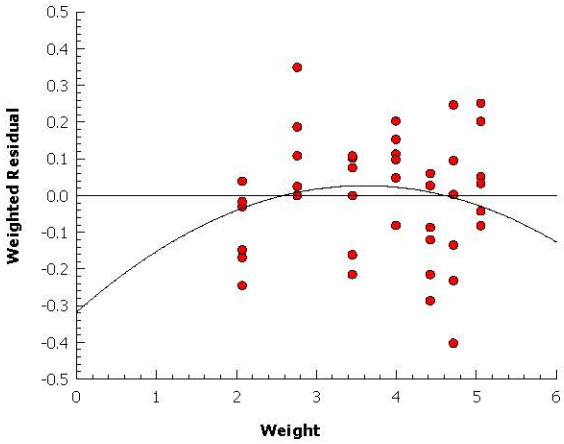
Analysis ID:	03-1477-9420	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:50	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Batch ID:	19-9144-5306	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	10 Aug-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:44	**Species:**	Glycine max	**Brine:**	
Duration:	540d 14h	**Source:**	Missouri Foundation Seeds, MO	**Age:**	

Sample ID:	14-0575-3397	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	10 Aug-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	31 Jan-13 13:44	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
21-2408-1449	Height	0.0003	0.0009	0.0005196	5.48%		Dunnett Multiple Comparison Test
19-7088-0458	Height	0.0001	0.0003	0.0001732	4.18%		Williams Multiple Comparison Test
04-3972-7164	Survival	0.0245	>0.0245	NA	NA		Jonckheere-Terpstra Step-Down Test
08-0392-2524	Survival	0.0245	>0.0245	NA	NA		Mann-Whitney U Two-Sample Test
07-0868-8781	Weight	<0.0001	0.0001	NA	7.75%		Dunnett Multiple Comparison Test
16-0848-9647	Weight	<0.0001	0.0001	NA	5.91%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
19-4390-5979	Height	IC5	0.0000537	1.97E-05	0.0001		Nonlinear Regression
		IC10	0.000149	9.75E-05	0.000214		
		IC25	0.000826	0.000664	0.00102		
		IC50	0.00552	0.00485	0.00627		
03-1477-9420	Weight	IC5	0.0000617	1.51E-05	0.000137		Nonlinear Regression
		IC10	0.000197	0.000109	0.000317		
		IC25	0.00137	0.00102	0.00181		
		IC50	0.0119	0.00965	0.0146		

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	46.6	44.2	49.1	43.8	49.6	0.963	2.36	5.06%	0.0%
0	Negative Control	6	45.9	43.9	47.9	43.6	49.4	0.781	1.91	4.16%	1.5%
0.0001		6	44.6	42.4	46.8	41.8	47	0.839	2.06	4.61%	4.36%
0.0003		6	43.7	41.2	46.2	40.4	46.2	0.974	2.39	5.45%	6.22%
0.0009		6	33.1	30.9	35.4	31.2	37	0.873	2.14	6.45%	28.9%
0.0026		6	27.6	26.5	28.6	26.6	29	0.421	1.03	3.74%	40.9%
0.0082		6	20.7	18.9	22.5	19.2	23.6	0.696	1.7	8.25%	55.7%
0.0245		6	14.9	13.7	16.1	13.8	17	0.473	1.16	7.77%	68.0%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.0001		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0003		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0009		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0026		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0082		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0245		6	1	1	1	1	1	0	0	0.0%	0.0%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	4.88	4.41	5.35	4.44	5.64	0.182	0.446	9.14%	0.0%
0	Negative Control	6	5.21	4.9	5.52	4.87	5.62	0.122	0.298	5.72%	-6.76%
0.0001		6	4.56	4.03	5.09	3.84	5.25	0.208	0.508	11.1%	6.56%
0.0003		6	4.21	3.91	4.5	3.82	4.55	0.116	0.283	6.73%	13.8%
0.0009		6	4.17	3.96	4.38	3.83	4.4	0.0806	0.197	4.73%	14.5%
0.0026		6	3.42	3.15	3.7	3.05	3.65	0.107	0.261	7.63%	29.9%
0.0082		6	2.97	2.75	3.2	2.76	3.34	0.0859	0.21	7.08%	39.0%
0.0245		6	1.94	1.77	2.1	1.72	2.13	0.0641	0.157	8.1%	60.3%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	45.8	48.8	44.4	49.6	47.4	43.8
0	Negative Control	43.6	46.2	45.6	49.4	45.2	45.6
0.0001		43.4	47	44.2	47	44.2	41.8
0.0003		42.6	42	45.6	46.2	45.6	40.4
0.0009		31.2	32.2	33.4	37	33.6	31.4
0.0026		29	26.8	28.2	26.6	28.2	26.6
0.0082		20	19.4	21.8	23.6	20	19.2
0.0245		13.8	14.2	14.2	15	15.2	17

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.0001		1	1	1	1	1	1
0.0003		1	1	1	1	1	1
0.0009		1	1	1	1	1	1
0.0026		1	1	1	1	1	1
0.0082		1	1	1	1	1	1
0.0245		1	1	1	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	4.44	4.94	4.44	5.64	5.02	4.8
0	Negative Control	5.17	5.62	4.87	5.51	5.13	4.96
0.0001		4.21	5.25	3.84	4.72	4.42	4.92
0.0003		4.17	4.24	4.48	4.55	3.97	3.82
0.0009		4.3	3.83	4.22	4.4	4.09	4.19
0.0026		3.64	3.05	3.45	3.59	3.65	3.15
0.0082		2.8	2.94	3.34	3.07	2.94	2.76
0.0245		1.83	2.03	2.13	1.86	1.72	2.05

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	

Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Multiple Comparison Summary

Analysis ID	Endpoint	Comparison Method	NOEL	LOEL	TOEL	TU	PMSD	✓
10-6400-3022	Height	Dunnett Multiple Comparison Test	0.0026	0.0076	0.004445		10.2%	
18-4059-6771	Height	Williams Multiple Comparison Test	0.0026	0.0076	0.004445		7.95%	
04-3584-7883	Survival	Jonckheere-Terpstra Step-Down Test	0.0076	0.0224	0.01305		n/a	
00-6768-1453	Survival	Mann-Whitney U Two-Sample Test	0.0224	> 0.0224	n/a		12.8%	
07-1591-8880	Weight	Dunnett Multiple Comparison Test	< 0.0003	0.0003	n/a		12.6%	✓
01-8249-8426	Weight	Williams Multiple Comparison Test	< 0.0003	0.0003	n/a		9.81%	✓

Point Estimate Summary

Analysis ID	Endpoint	Point Estimate Method	Level	lbs ai/A	95% LCL	95% UCL	TU	✓
20-8595-1698	Height	Regression: 3P Cum Log-Normal (Probit)	IC5	0.001596	0.000527	0.002445		
			IC10	0.002566	0.001569	0.003563		
			IC25	0.005677	0.004385	0.007128		
			IC50	0.01372	0.01209	0.01556		
09-7215-4910	Survival	Regression: Log-Normal (Probit)	EC5	0.009482	0.00131	0.01437		
			EC10	0.01329	0.004587	0.0203		
			EC25	0.02337	0.01564	0.0861		
			EC50	0.04375	0.02604	1.006		
19-8303-7791	Weight	Regression: 3P Cum Log-Normal (Probit)	IC5	0.0009219	n/a	0.001734		✓
			IC10	0.001602	0.000678	0.0026		✓
			IC25	0.004036	0.002672	0.005713		✓
			IC50	0.01126	0.00898	0.01412		✓

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — Wildlife International

Height Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	6	50.2	47.1	53.3	46.8	54.4	1.204	2.95	5.88%	0.00%
0	S	6	53.87	49.77	57.97	48	58.4	1.596	3.908	7.26%	-7.30%
0.0003		6	50.97	47.51	54.43	47.6	54.6	1.346	3.297	6.47%	-1.53%
0.0009		6	54.6	48.82	60.38	48.6	61	2.249	5.508	10.09%	-8.76%
0.0026		6	52.32	49.21	55.42	48.8	57.4	1.207	2.956	5.65%	-4.22%
0.0076		6	31.63	26.4	36.87	26.6	38	2.035	4.985	15.76%	36.99%
0.0224		6	19.55	17.77	21.33	16.5	21.4	0.6927	1.697	8.68%	61.06%

Survival Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	6	0.9667	0.8810	1.0000	0.8000	1.0000	0.0333	0.0817	8.45%	0.00%
0	S	6	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-3.45%
0.0003		6	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-3.45%
0.0009		6	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-3.45%
0.0026		6	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	-3.45%
0.0076		6	0.9667	0.8810	1.0000	0.8000	1.0000	0.0333	0.0817	8.45%	0.00%
0.0224		6	0.7667	0.4877	1.0000	0.4000	1.0000	0.1085	0.2658	34.67%	20.69%

Weight Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	6	5.458	4.92	5.996	4.74	6.07	0.2093	0.5127	9.39%	0.00%
0	S	6	5.54	5.198	5.882	4.97	5.97	0.1332	0.3262	5.89%	-1.50%
0.0003		6	4.625	4.141	5.109	4.01	5.32	0.1884	0.4615	9.98%	15.27%
0.0009		6	4.028	3.661	4.396	3.38	4.3	0.143	0.3503	8.70%	26.20%
0.0026		6	4.222	3.387	5.057	3.03	5.45	0.3249	0.7957	18.85%	22.66%
0.0076		6	3.148	2.808	3.488	2.75	3.68	0.1322	0.3239	10.29%	42.32%
0.0224		6	1.485	0.9918	1.978	0.85	2	0.1919	0.47	31.65%	72.79%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — Wildlife International

Height Detail

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	47.4	46.8	52.4	54.4	51	49.2
0	S	48	58.4	57.6	53.6	51.2	54.4
0.0003		47.6	54.6	54	53.2	48.6	47.8
0.0009		50.8	61	58.8	58.8	49.6	48.6
0.0026		53	48.8	57.4	50.5	53	51.2
0.0076		31.6	28.4	37.4	26.6	27.8	38
0.0224		19.8	19	16.5	21.4	20	20.6

Survival Detail

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	1.0000	0.8000	1.0000	1.0000	1.0000	1.0000
0	S	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0003		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0009		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0026		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0076		1.0000	1.0000	1.0000	0.8000	1.0000	1.0000
0.0224		1.0000	0.6000	0.4000	1.0000	0.6000	1.0000

Weight Detail

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	6.07	4.74	5.68	5.86	5	5.4
0	S	5.5	5.65	4.97	5.52	5.63	5.97
0.0003		4.33	4.86	4.44	4.01	4.79	5.32
0.0009		4.29	4.1	3.9	4.2	4.3	3.38
0.0026		3.83	5.45	4.5	3.03	4.22	4.3
0.0076		2.75	3.2	3.68	3.11	2.89	3.26
0.0224		1.26	1.12	0.85	1.84	1.84	2

Survival Binomials

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	5/5	4/5	5/5	5/5	5/5	5/5
0	S	5/5	5/5	5/5	5/5	5/5	5/5
0.0003		5/5	5/5	5/5	5/5	5/5	5/5
0.0009		5/5	5/5	5/5	5/5	5/5	5/5
0.0026		5/5	5/5	5/5	5/5	5/5	5/5
0.0076		5/5	5/5	5/5	4/5	5/5	5/5
0.0224		5/5	3/5	2/5	5/5	3/5	5/5

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	10-6400-3022	**Endpoint:**	Height	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	0.0026	0.0076	0.004445		10.19%

Dunnett Multiple Comparison Test

Control vs	Conc-lbs ai/A	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Negative Control	0.0003	-0.35	2.335	5.116	10	CDF	0.9164	Non-Significant Effect
	0.0009	-2.009	2.335	5.116	10	CDF	0.9994	Non-Significant Effect
	0.0026	-0.9662	2.335	5.116	10	CDF	0.9820	Non-Significant Effect
	0.0076*	8.475	2.335	5.116	10	CDF	<1.0E-37	Significant Effect
	0.0224*	13.99	2.335	5.116	10	CDF	<1.0E-37	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	6093.03	1218.61	5	84.64	<1.0E-37	Significant Effect
Error	431.91	14.397	30			
Total	6524.94		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	7.431	15.09	0.1905	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9556	0.9166	0.1567	Normal Distribution

Height Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	50.2	47.1	53.3	50.1	46.8	54.4	1.204	5.88%	0.00%
0.0003		6	50.97	47.51	54.43	50.9	47.6	54.6	1.346	6.47%	-1.53%
0.0009		6	54.6	48.82	60.38	54.8	48.6	61	2.249	10.09%	-8.76%
0.0026		6	52.32	49.21	55.42	52.1	48.8	57.4	1.207	5.65%	-4.22%
0.0076		6	31.63	26.4	36.87	30	26.6	38	2.035	15.76%	36.99%
0.0224		6	19.55	17.77	21.33	19.9	16.5	21.4	0.6927	8.68%	61.06%

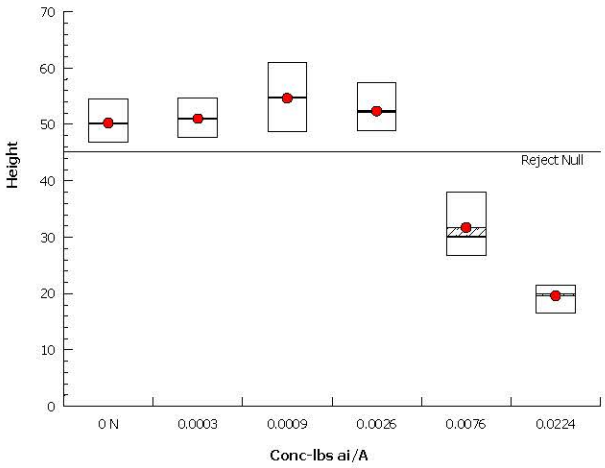
Height Detail

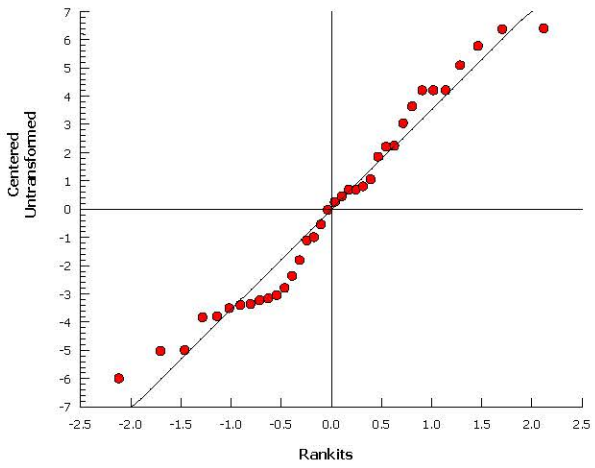
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	47.4	46.8	52.4	54.4	51	49.2
0.0003		47.6	54.6	54	53.2	48.6	47.8
0.0009		50.8	61	58.8	58.8	49.6	48.6
0.0026		53	48.8	57.4	50.5	53	51.2
0.0076		31.6	28.4	37.4	26.6	27.8	38
0.0224		19.8	19	16.5	21.4	20	20.6

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	10-6400-3022	**Endpoint:**	Height	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	18-4059-6771	**Endpoint:**	Height	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:48	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	0.0026	0.0076	0.004445		7.95%

Williams Multiple Comparison Test

Control	vs	Conc-lbs ai/A	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		0.0003	-0.35	1.697	3.718	10	CDF	>0.05	Non-Significant Effect
		0.0009	-1.179	1.776	3.891	10	CDF	>0.05	Non-Significant Effect
		0.0026	-0.9662	1.801	3.945	10	CDF	>0.05	Non-Significant Effect
		0.0076*	8.475	1.814	3.974	10	CDF	<0.05	Significant Effect
		0.0224*	13.99	1.821	3.989	10	CDF	<0.05	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	6093.03	1218.61	5	84.64	<1.0E-37	Significant Effect
Error	431.91	14.397	30			
Total	6524.94		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	7.431	15.09	0.1905	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9556	0.9166	0.1567	Normal Distribution

Height Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	50.2	47.1	53.3	50.1	46.8	54.4	1.204	5.88%	0.00%
0.0003		6	50.97	47.51	54.43	50.9	47.6	54.6	1.346	6.47%	-1.53%
0.0009		6	54.6	48.82	60.38	54.8	48.6	61	2.249	10.09%	-8.76%
0.0026		6	52.32	49.21	55.42	52.1	48.8	57.4	1.207	5.65%	-4.22%
0.0076		6	31.63	26.4	36.87	30	26.6	38	2.035	15.76%	36.99%
0.0224		6	19.55	17.77	21.33	19.9	16.5	21.4	0.6927	8.68%	61.06%

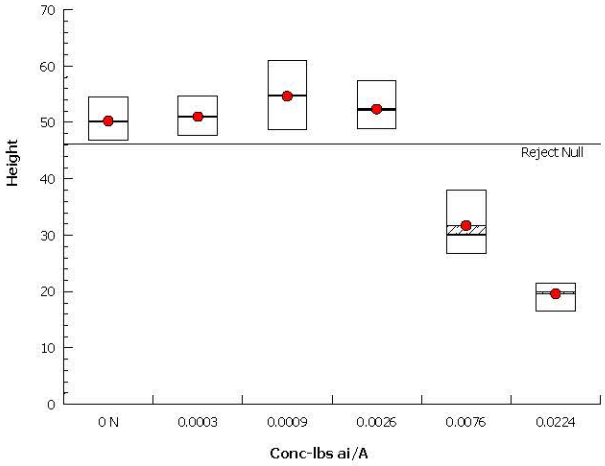
Height Detail

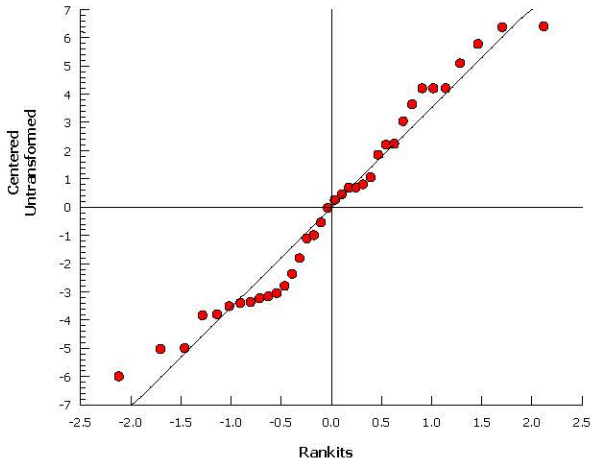
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	47.4	46.8	52.4	54.4	51	49.2
0.0003		47.6	54.6	54	53.2	48.6	47.8
0.0009		50.8	61	58.8	58.8	49.6	48.6
0.0026		53	48.8	57.4	50.5	53	51.2
0.0076		31.6	28.4	37.4	26.6	27.8	38
0.0224		19.8	19	16.5	21.4	20	20.6

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	18-4059-6771	**Endpoint:**	Height	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:48	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	00-6768-1453	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	0.0224	> 0.0224	n/a		12.81%

Mann-Whitney U Two-Sample Test

Control	vs	Conc-lbs ai/A	Test Stat	Critical	Ties	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		0.0003	15	n/a	1	10	Exact	1.0000	Non-Significant Effect
		0.0009	15	n/a	1	10	Exact	1.0000	Non-Significant Effect
		0.0026	15	n/a	1	10	Exact	1.0000	Non-Significant Effect
		0.0076	18	n/a	2	10	Exact	0.7727	Non-Significant Effect
		0.0224	25.5	n/a	1	10	Exact	0.0909	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.25	0.05	5	3.571	0.0119	Significant Effect
Error	0.42	0.014	30			
Total	0.67		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Levene Equality of Variance Test	26.12	3.699	<1.0E-37	Unequal Variances
Variances	Mod Levene Equality of Variance Test	15	3.699	2.1E-07	Unequal Variances
Distribution	Shapiro-Wilk W Normality Test	0.7481	0.9166	1.8E-06	Non-Normal Distribution

Survival Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	0.9667	0.8810	1.0000	1.0000	0.8000	1.0000	0.0333	8.45%	0.00%
0.0003		6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-3.45%
0.0009		6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-3.45%
0.0026		6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-3.45%
0.0076		6	0.9667	0.8810	1.0000	1.0000	0.8000	1.0000	0.0333	8.45%	0.00%
0.0224		6	0.7667	0.4877	1.0000	0.8000	0.4000	1.0000	0.1085	34.67%	20.69%

Survival Detail

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	1.0000	0.8000	1.0000	1.0000	1.0000	1.0000
0.0003		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0009		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0026		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0076		1.0000	1.0000	1.0000	0.8000	1.0000	1.0000
0.0224		1.0000	0.6000	0.4000	1.0000	0.6000	1.0000

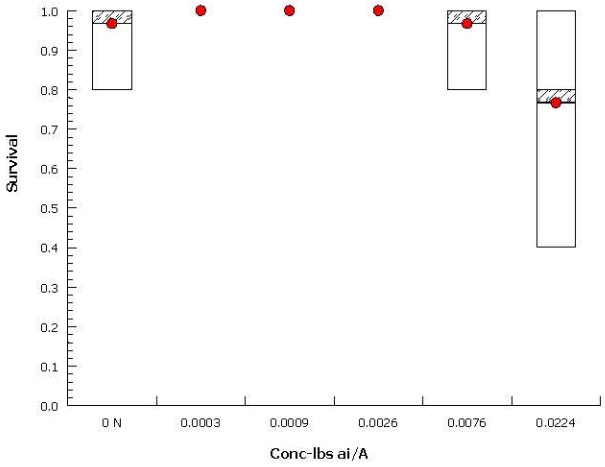
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

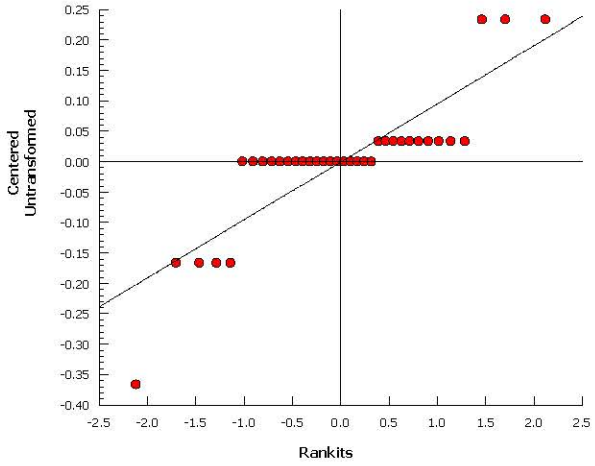
Analysis ID:	00-6768-1453	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Survival Binomials

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	5/5	4/5	5/5	5/5	5/5	5/5
0.0003		5/5	5/5	5/5	5/5	5/5	5/5
0.0009		5/5	5/5	5/5	5/5	5/5	5/5
0.0026		5/5	5/5	5/5	5/5	5/5	5/5
0.0076		5/5	5/5	5/5	4/5	5/5	5/5
0.0224		5/5	3/5	2/5	5/5	3/5	5/5

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	04-3584-7883	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:48	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU
Untransformed	C > T	0.0076	0.0224	0.01305	

Jonckheere-Terpstra Step-Down Test

Control vs	Conc-lbs ai/A	Test Stat	Critical	Ties	P-Type	P-Value	Decision(α:5%)
Negative Control	0.0003	-1	1.645	1	Asymp	0.9101	Non-Significant Effect
	0.0009	-1.225	1.645	1	Asymp	0.9101	Non-Significant Effect
	0.0026	-1.342	1.645	1	Asymp	0.9101	Non-Significant Effect
	0.0076	0	1.645	2	Asymp	0.5000	Non-Significant Effect
	0.0224*	1.941	1.645	3	Asymp	0.0261	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.25	0.05	5	3.571	0.0119	Significant Effect
Error	0.42	0.014	30			
Total	0.67		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Levene Equality of Variance Test	26.12	3.699	<1.0E-37	Unequal Variances
Variances	Mod Levene Equality of Variance Test	15	3.699	2.1E-07	Unequal Variances
Distribution	Shapiro-Wilk W Normality Test	0.7481	0.9166	1.8E-06	Non-Normal Distribution

Survival Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	0.9667	0.8810	1.0000	1.0000	0.8000	1.0000	0.0333	8.45%	0.00%
0.0003		6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-3.45%
0.0009		6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-3.45%
0.0026		6	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.0000	0.00%	-3.45%
0.0076		6	0.9667	0.8810	1.0000	1.0000	0.8000	1.0000	0.0333	8.45%	0.00%
0.0224		6	0.7667	0.4877	1.0000	0.8000	0.4000	1.0000	0.1085	34.67%	20.69%

Survival Detail

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	1.0000	0.8000	1.0000	1.0000	1.0000	1.0000
0.0003		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0009		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0026		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0076		1.0000	1.0000	1.0000	0.8000	1.0000	1.0000
0.0224		1.0000	0.6000	0.4000	1.0000	0.6000	1.0000

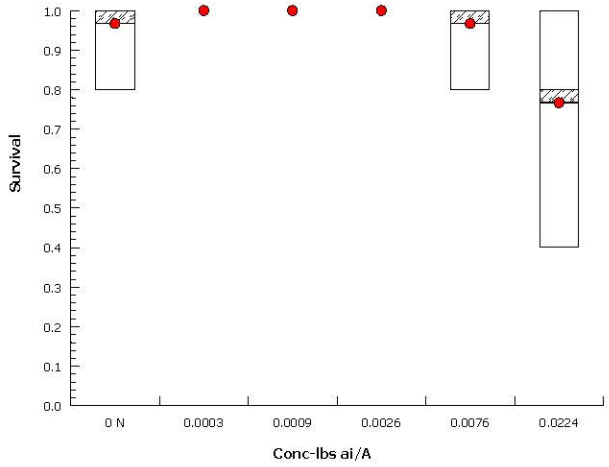
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

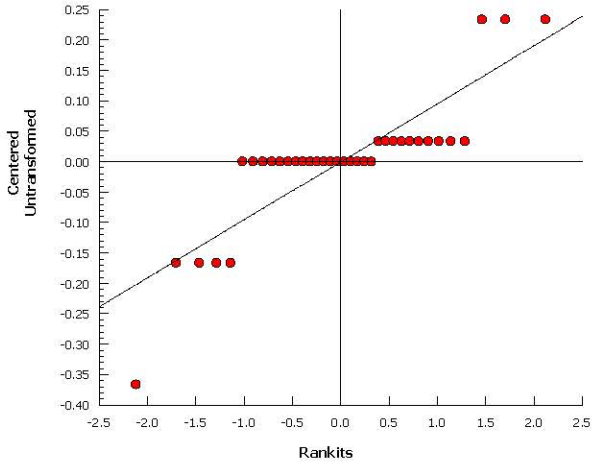
Analysis ID:	04-3584-7883	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:48	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Survival Binomials

Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	5/5	4/5	5/5	5/5	5/5	5/5
0.0003		5/5	5/5	5/5	5/5	5/5	5/5
0.0009		5/5	5/5	5/5	5/5	5/5	5/5
0.0026		5/5	5/5	5/5	5/5	5/5	5/5
0.0076		5/5	5/5	5/5	4/5	5/5	5/5
0.0224		5/5	3/5	2/5	5/5	3/5	5/5

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	07-1591-8880	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	< 0.0003	0.0003	n/a		12.58%

Dunnett Multiple Comparison Test

Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		0.0003*	2.833	2.335	0.687	10	CDF	0.0167	Significant Effect
		0.0009*	4.861	2.335	0.687	10	CDF	8.1E-05	Significant Effect
		0.0026*	4.204	2.335	0.687	10	CDF	5.0E-04	Significant Effect
		0.0076*	7.853	2.335	0.687	10	CDF	<1.0E-37	Significant Effect
		0.0224*	13.51	2.335	0.687	10	CDF	<1.0E-37	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	56.6394	11.3279	5	43.64	<1.0E-37	Significant Effect
Error	7.78763	0.259588	30			
Total	64.427		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	5.15	15.09	0.3978	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9866	0.9166	0.9329	Normal Distribution

Weight Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	5.458	4.92	5.996	5.54	4.74	6.07	0.2093	9.39%	0.00%
0.0003		6	4.625	4.141	5.109	4.615	4.01	5.32	0.1884	9.98%	15.27%
0.0009		6	4.028	3.661	4.396	4.15	3.38	4.3	0.143	8.70%	26.20%
0.0026		6	4.222	3.387	5.057	4.26	3.03	5.45	0.3249	18.85%	22.66%
0.0076		6	3.148	2.808	3.488	3.155	2.75	3.68	0.1322	10.29%	42.32%
0.0224		6	1.485	0.9918	1.978	1.55	0.85	2	0.1919	31.65%	72.79%

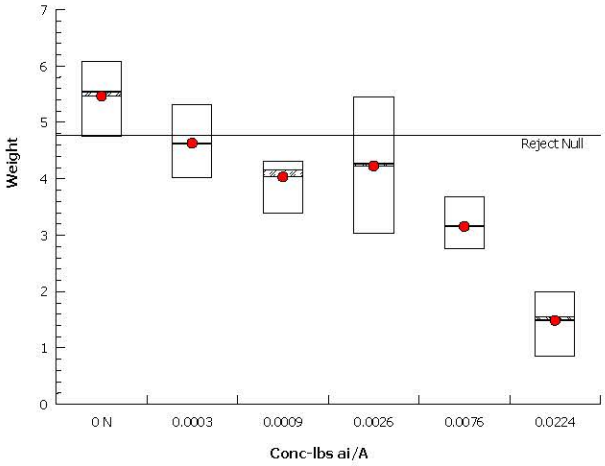
Weight Detail

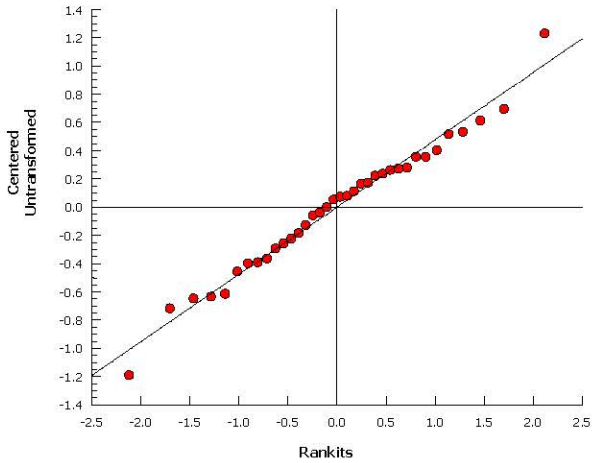
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	6.07	4.74	5.68	5.86	5	5.4
0.0003		4.33	4.86	4.44	4.01	4.79	5.32
0.0009		4.29	4.1	3.9	4.2	4.3	3.38
0.0026		3.83	5.45	4.5	3.03	4.22	4.3
0.0076		2.75	3.2	3.68	3.11	2.89	3.26
0.0224		1.26	1.12	0.85	1.84	1.84	2

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	07-1591-8880	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	01-8249-8426	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:48	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Data Transform	Alt Hyp	NOEL	LOEL	TOEL	TU	PMSD
Untransformed	C > T	< 0.0003	0.0003	n/a		9.81%

Williams Multiple Comparison Test

Control	vs	Control II	Test Stat	Critical	MSD	DF	P-Type	P-Value	Decision(α:5%)
Negative Control		0.0003*	2.833	1.697	0.499	10	CDF	<0.05	Significant Effect
		0.0009*	4.861	1.776	0.522	10	CDF	<0.05	Significant Effect
		0.0026*	4.533	1.801	0.53	10	CDF	<0.05	Significant Effect
		0.0076*	7.853	1.814	0.534	10	CDF	<0.05	Significant Effect
		0.0224*	13.51	1.821	0.536	10	CDF	<0.05	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	56.6394	11.3279	5	43.64	<1.0E-37	Significant Effect
Error	7.78763	0.259588	30			
Total	64.427		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance Test	5.15	15.09	0.3978	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9866	0.9166	0.9329	Normal Distribution

Weight Summary

Conc-lbs ai/A	Code	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	N	6	5.458	4.92	5.996	5.54	4.74	6.07	0.2093	9.39%	0.00%
0.0003		6	4.625	4.141	5.109	4.615	4.01	5.32	0.1884	9.98%	15.27%
0.0009		6	4.028	3.661	4.396	4.15	3.38	4.3	0.143	8.70%	26.20%
0.0026		6	4.222	3.387	5.057	4.26	3.03	5.45	0.3249	18.85%	22.66%
0.0076		6	3.148	2.808	3.488	3.155	2.75	3.68	0.1322	10.29%	42.32%
0.0224		6	1.485	0.9918	1.978	1.55	0.85	2	0.1919	31.65%	72.79%

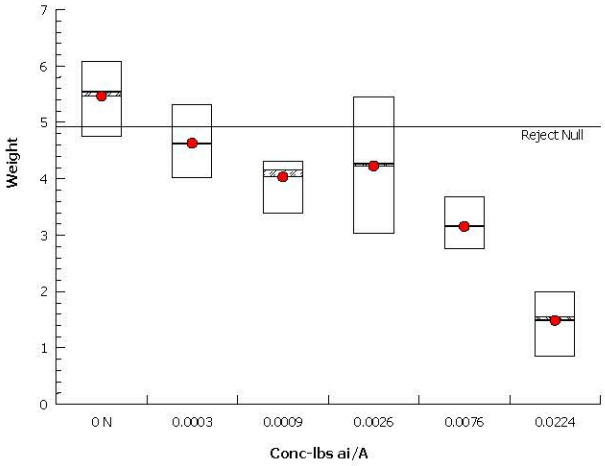
Weight Detail

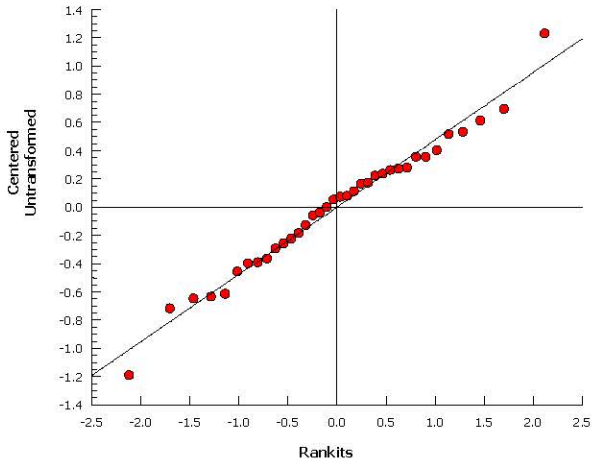
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	6.07	4.74	5.68	5.86	5	5.4
0.0003		4.33	4.86	4.44	4.01	4.79	5.32
0.0009		4.29	4.1	3.9	4.2	4.3	3.38
0.0026		3.83	5.45	4.5	3.03	4.22	4.3
0.0076		2.75	3.2	3.68	3.11	2.89	3.26
0.0224		1.26	1.12	0.85	1.84	1.84	2

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	01-8249-8426	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:48	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	09-7215-4910	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Linear Regression (GLM)	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Linear Regression Options

Model Name	Link Function	Threshold Option	Thresh	Optimized	Pooled	Het Corr	Weighted
Log-Normal (Probit)	η=inv Φ[π]	Zero Threshold	0	No	No	No	Yes

Regression Summary

Iters	LL	AICc	BIC	Mu	Sigma	Adj R2	F Stat	Critical	P-Value	Decision(α:5%)
8	-12.21	28.86	31.22	-1.359	0.4038	1	0.02668	2.991	0.9940	Non-Significant Lack of Fit

Point Estimates

Level	lbs ai/A	95% LCL	95% UCL
EC5	0.009482	0.00131	0.01437
EC10	0.01329	0.004587	0.0203
EC25	0.02337	0.01564	0.0861
EC50	0.04375	0.02604	1.006

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
Slope	2.477	0.9602	0.5947	4.359	2.579	0.0154	Significant Parameter
Intercept	3.366	1.718	-0.00153	6.733	1.959	0.0601	Non-Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	21970000	21970000	1	39410000	<1.0E-37	Significant
Lack of Fit	0.04982	0.01661	3	0.02668	0.9940	Non-Significant
Pure Error	15.56	0.6224	25			
Residual	15.61	0.5575	28			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF Test	15.61	41.34	0.9713	Non-Significant Heterogeneity
	Likelihood Ratio GOF Test	16.25	41.34	0.9619	Non-Significant Heterogeneity
Variances	Mod Levene Equality of Variance	6.441	2.759	0.0010	Unequal Variances
Distribution	Shapiro-Wilk W Normality Test	0.7702	0.9303	2.0E-05	Non-Normal Distribution
	Anderson-Darling A2 Normality Te	3.425	2.492	<1.0E-37	Non-Normal Distribution

Survival Summary — **Calculated Variate(A/B)**

Conc-lbs ai/A	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect	A	B
0.0003		6	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.0%	30	30
0.0009		6	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.0%	30	30
0.0026		6	1.0000	1.0000	1.0000	0.0000	0.0000	0.00%	0.0%	30	30
0.0076		6	0.9667	0.8000	1.0000	0.0333	0.0817	8.45%	3.33%	29	30
0.0224		6	0.7667	0.4000	1.0000	0.1085	0.2658	34.67%	23.33%	23	30

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID: 09-7215-4910 **Endpoint:** Survival **CETIS Version:** CETISv1.9.2
Analyzed: 02 Nov-16 8:47 **Analysis:** Linear Regression (GLM) **Official Results:** Yes

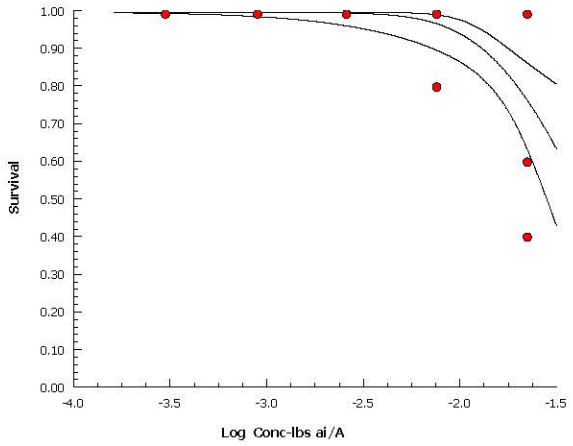
Survival Detail

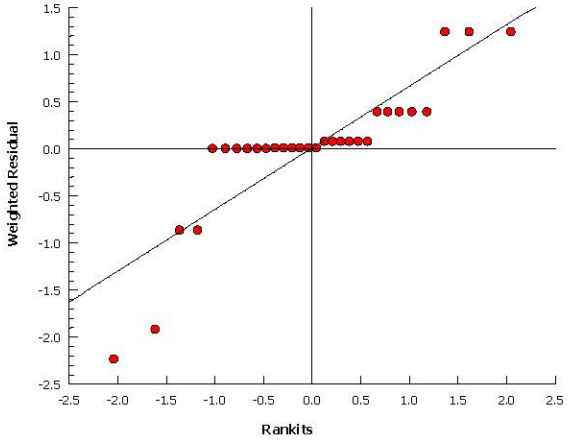
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0.0003		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0009		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0026		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
0.0076		1.0000	1.0000	1.0000	0.8000	1.0000	1.0000
0.0224		1.0000	0.6000	0.4000	1.0000	0.6000	1.0000

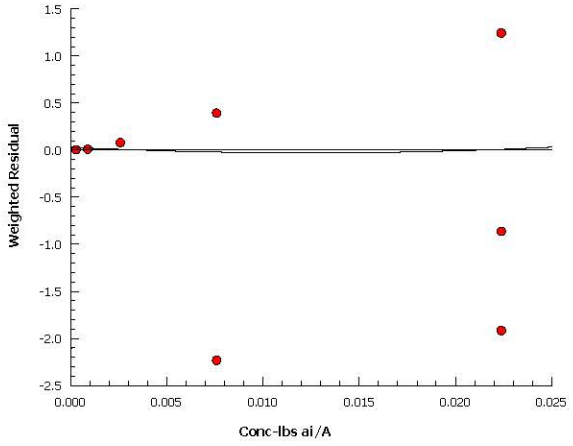
Survival Binomials

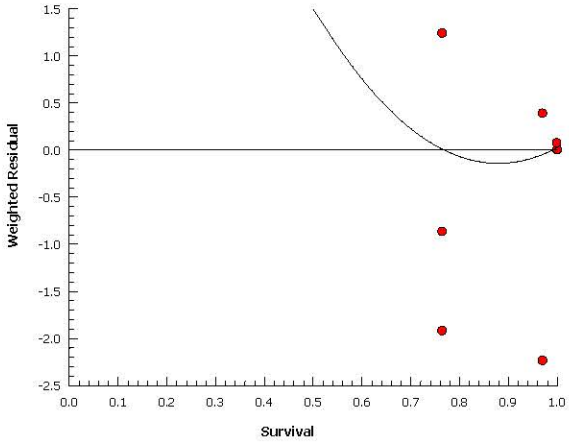
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0.0003		5/5	5/5	5/5	5/5	5/5	5/5
0.0009		5/5	5/5	5/5	5/5	5/5	5/5
0.0026		5/5	5/5	5/5	5/5	5/5	5/5
0.0076		5/5	5/5	5/5	4/5	5/5	5/5
0.0224		5/5	3/5	2/5	5/5	3/5	5/5

Graphics Log-Normal: inv Φ[π]=α+β·log[x]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-8595-1698	**Endpoint:**	Height	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Nonlinear Regression (NLR)	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Non-Linear Regression Options

Model Name and Function	Weighting Function	PTBS Function	X Trans	Y Trans
3P Cum Log-Normal (Probit): $\mu=\alpha\cdot[1-\Phi[\log[x/\delta]/\gamma]]$	Box-Cox [$\omega=\mu^{[2\cdot\varphi-2]}$]	Off [$\mu^*=\mu$]	None	None

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
70	-118.5	243.8	247.8	0.3387	Yes	7.805	2.922	0.0005	Significant Lack of Fit

Point Estimates

Level	lbs ai/A	95% LCL	95% UCL
IC5	0.001596	0.000527	0.002445
IC10	0.002566	0.001569	0.003563
IC25	0.005677	0.004385	0.007128
IC50	0.01372	0.01209	0.01556

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
α	52.8	1.448	49.86	55.75	36.47	<1.0E-37	Significant Parameter
γ	1.308	0.15	1.003	1.613	8.72	<1.0E-37	Significant Parameter
δ	0.01372	0.001149	0.01138	0.01605	11.94	<1.0E-37	Significant Parameter
φ	0.2472						

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	228.7	76.22	3	923.8	<1.0E-37	Significant
Lack of Fit	1.194	0.3979	3	7.805	5.4E-04	Significant
Pure Error	1.529	0.05098	30			
Residual	2.723	0.08251	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Variances	Bartlett Equality of Variance Test	5.716	11.07	0.3348	Equal Variances
	Mod Levene Equality of Variance	2.412	2.534	0.0594	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9834	0.9398	0.8525	Normal Distribution
	Anderson-Darling A2 Normality Te	0.2543	2.492	0.7568	Normal Distribution

Height Summary

			Calculated Variate						
Conc-lbs ai/A	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	6	50.2	46.8	54.4	1.204	2.95	5.88%	0.0%
0.0003		6	50.97	47.6	54.6	1.346	3.297	6.47%	-1.53%
0.0009		6	54.6	48.6	61	2.249	5.508	10.09%	-8.77%
0.0026		6	52.32	48.8	57.4	1.207	2.956	5.65%	-4.22%
0.0076		6	31.63	26.6	38	2.035	4.985	15.76%	36.99%
0.0224		6	19.55	16.5	21.4	0.6927	1.697	8.68%	61.06%

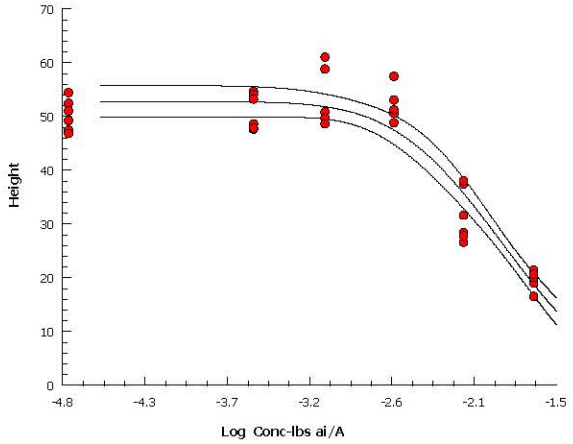
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

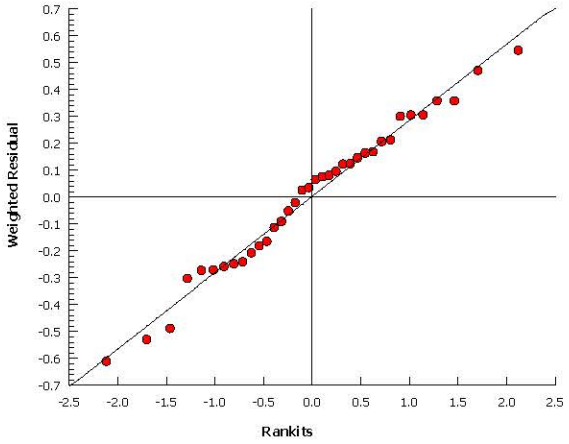
Analysis ID:	20-8595-1698	**Endpoint:**	Height	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Nonlinear Regression (NLR)	**Official Results:**	Yes

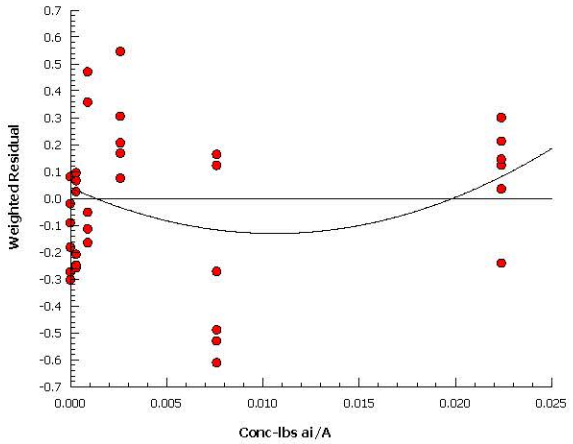
Height Detail

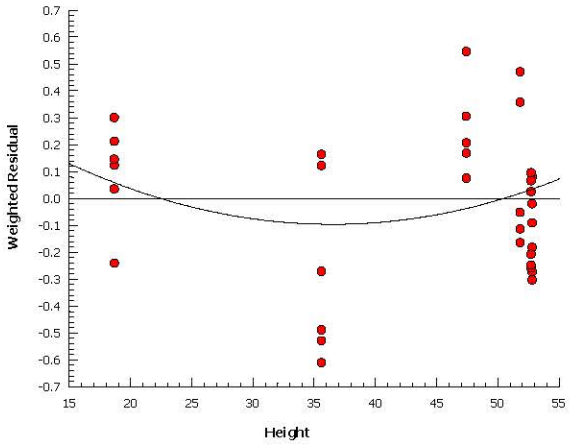
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	47.4	46.8	52.4	54.4	51	49.2
0.0003		47.6	54.6	54	53.2	48.6	47.8
0.0009		50.8	61	58.8	58.8	49.6	48.6
0.0026		53	48.8	57.4	50.5	53	51.2
0.0076		31.6	28.4	37.4	26.6	27.8	38
0.0224		19.8	19	16.5	21.4	20	20.6

Graphics Model: 3P Cum Log-Normal (Probit): μ=α·[1- Φ[log[x/δ]/γ]] Distribution: Box-Cox [ω=μ^[2·φ-2]]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	19-8303-7791	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Nonlinear Regression (NLR)	**Official Results:**	Yes
Batch ID:	16-5421-8393	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	E. Donovan
Start Date:	12 Oct-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	31 Jan-13 13:57	**Species:**	Lycopersicon esculentum	**Brine:**	
Duration:	477d 14h	**Source:**	Meyer Seed Co., Baltimore, MD	**Age:**	
Sample ID:	07-9276-7154	**Code:**	48718015	**Client:**	CDM Smith - J. Gaidos
Sample Date:	12 Oct-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receipt Date:	31 Jan-13 13:57	**Source:**	BASF Corporation		
Sample Age:	n/a	**Station:**			

Non-Linear Regression Options

Model Name and Function	Weighting Function	PTBS Function	X Trans	Y Trans
3P Cum Log-Normal (Probit): $\mu=\alpha\cdot[1-\Phi[\log[x/\delta]/\gamma]]$	Box-Cox [$\omega=\mu^{[2\cdot\varphi-2]}$]	Off [$\mu^*=\mu$]	None	None

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
89	-44.92	96.59	100.6	0.5963	Yes	5.181	2.922	0.0053	Significant Lack of Fit

Point Estimates

Level	lbs ai/A	95% LCL	95% UCL
IC5	0.0009219	n/a	0.001734
IC10	0.001602	0.000678	0.0026
IC25	0.004036	0.002672	0.005713
IC50	0.01126	0.00898	0.01412

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
α	4.884	0.1996	4.478	5.29	24.46	<1.0E-37	Significant Parameter
γ	1.522	0.248	1.017	2.026	6.135	6.5E-07	Significant Parameter
δ	0.01126	0.001658	0.007888	0.01464	6.792	<1.0E-37	Significant Parameter
φ	0.5687						

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	167.2	55.72	3	454.9	<1.0E-37	Significant
Lack of Fit	1.379	0.4598	3	5.181	0.0053	Significant
Pure Error	2.662	0.08875	30			
Residual	4.042	0.1225	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Variances	Bartlett Equality of Variance Test	5.863	11.07	0.3197	Equal Variances
	Mod Levene Equality of Variance	1.423	2.534	0.2447	Equal Variances
Distribution	Shapiro-Wilk W Normality Test	0.9891	0.9398	0.9729	Normal Distribution
	Anderson-Darling A2 Normality Te	0.1371	2.492	1.0000	Normal Distribution

Weight Summary

			Calculated Variate						
Conc-lbs ai/A	Code	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	N	6	5.458	4.74	6.07	0.2093	0.5127	9.39%	0.0%
0.0003		6	4.625	4.01	5.32	0.1884	0.4615	9.98%	15.27%
0.0009		6	4.028	3.38	4.3	0.143	0.3503	8.70%	26.2%
0.0026		6	4.222	3.03	5.45	0.3249	0.7957	18.85%	22.66%
0.0076		6	3.148	2.75	3.68	0.1322	0.3239	10.29%	42.32%
0.0224		6	1.485	0.85	2	0.1919	0.47	31.65%	72.79%

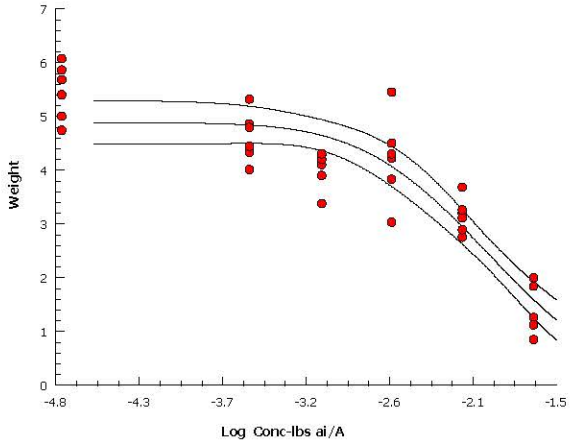
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

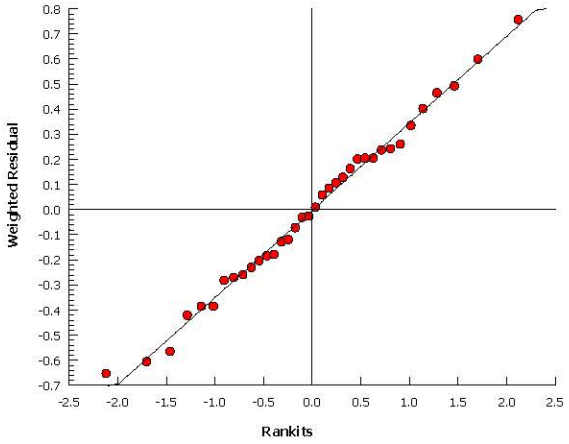
Analysis ID:	19-8303-7791	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.9.2
Analyzed:	02 Nov-16 8:47	**Analysis:**	Nonlinear Regression (NLR)	**Official Results:**	Yes

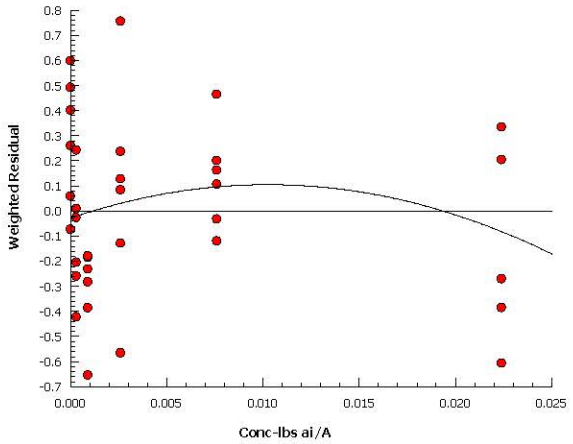
Weight Detail

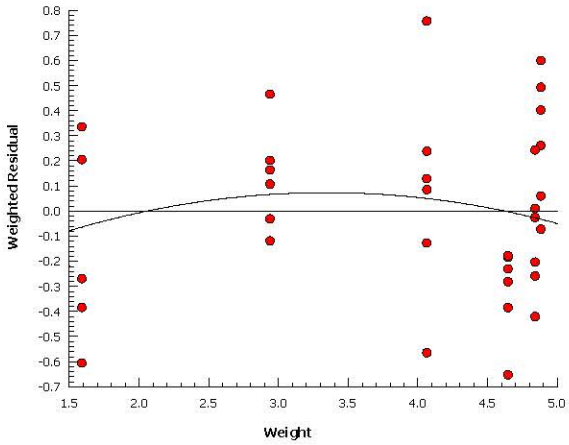
Conc-lbs ai/A	Code	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	N	6.07	4.74	5.68	5.86	5	5.4
0.0003		4.33	4.86	4.44	4.01	4.79	5.32
0.0009		4.29	4.1	3.9	4.2	4.3	3.38
0.0026		3.83	5.45	4.5	3.03	4.22	4.3
0.0076		2.75	3.2	3.68	3.11	2.89	3.26
0.0224		1.26	1.12	0.85	1.84	1.84	2

Graphics Model: 3P Cum Log-Normal (Probit): μ=α·[1- Φ[log[x/δ]/γ]] Distribution: Box-Cox [ω=μ^[2·φ-2]]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	

Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Comparison Summary

Analysis ID	Endpoint	NOEL	LOEL	TOEL	PMSD	TU	Method
13-7276-4430	Height	0.0721	0.2111	0.1234	NA		Jonckheere-Terpstra Step-Down Test
21-3427-2443	Height	0.0721	0.2111	0.1234	6.54%		Mann-Whitney U Two-Sample Test
18-8679-3747	Survival	0.6474	1.9699	1.129	NA		Jonckheere-Terpstra Step-Down Test
15-5959-4572	Survival	1.9699	>1.9699	NA	3.49%		Mann-Whitney U Two-Sample Test
14-2369-4857	Weight	0.0721	0.2111	0.1234	14.4%		Dunnett Multiple Comparison Test
20-1082-1034	Weight	0.0721	0.2111	0.1234	11.2%		Williams Multiple Comparison Test

Point Estimate Summary

Analysis ID	Endpoint	Level		95% LCL	95% UCL	TU	Method
15-3168-1190	Height	IC5	0.14	0.0521	0.25		Nonlinear Regression
		IC10	0.335	0.192	0.515		
		IC25	1.44	1.1	1.85		
		IC50	7.29	3.61	14.7		
18-8985-4468	Weight	IC5	0.047	0.00467	0.089		Nonlinear Regression
		IC10	0.0906	0.0459	0.143		
		IC25	0.272	0.191	0.372		
		IC50	0.922	0.756	1.12		

Height Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	54	51.3	56.7	49	56.2	1.07	2.61	4.84%	0.0%
0	Negative Control	6	53.9	51.7	56.1	52.2	57.8	0.848	2.08	3.85%	0.19%
0.024		6	55.1	52.6	57.5	52	59	0.95	2.33	4.23%	-1.98%
0.0721		6	52.8	49.1	56.5	49	58.4	1.44	3.53	6.69%	2.16%
0.2111		6	51.3	49.6	53.1	49.4	53.6	0.671	1.64	3.2%	4.94%
0.6474		6	45.4	40.9	49.9	36.8	48	1.76	4.32	9.51%	15.9%
1.9699		6	38.8	33.6	44	29.2	42.2	2.02	4.94	12.7%	28.1%

Survival Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1	1	1	1	1	0	0	0.0%	0.0%
0	Negative Control	6	1	1	1	1	1	0	0	0.0%	0.0%
0.024		6	1	1	1	1	1	0	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	0	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	0	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	0	0	0.0%	0.0%
1.9699		6	0.967	0.881	1	0.8	1	0.0333	0.0816	8.45%	3.33%

Weight Summary

Group	Control Type	Count	Mean	95% LCL	95% UCL	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Solvent Blank	6	1.2	1.12	1.29	1.08	1.29	0.034	0.0833	6.93%	0.0%
0	Negative Control	6	1.18	1.06	1.29	1.05	1.34	0.0448	0.11	9.32%	2.08%
0.024		6	1.27	1.06	1.47	1.07	1.57	0.0786	0.193	15.2%	-5.26%
0.0721		6	1.1	0.966	1.24	0.96	1.34	0.0536	0.131	11.9%	8.31%
0.2111		6	0.97	0.902	1.04	0.9	1.07	0.0263	0.0645	6.65%	19.4%
0.6474		6	0.7	0.588	0.812	0.56	0.84	0.0437	0.107	15.3%	41.8%
1.9699		6	0.417	0.299	0.534	0.23	0.56	0.0457	0.112	26.9%	65.4%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Height Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	49	56.2	55.6	55.2	53.6	54.4
0	Negative Control	52.2	57.8	52.6	54	52.6	54.2
0.024		59	55.4	54.6	53.8	52	55.6
0.0721		58.4	49.6	55.2	52	52.8	49
0.2111		52.2	52.2	51	53.6	49.6	49.4
0.6474		36.8	47.2	47	48	45.4	48
1.9699		29.2	41.6	42	38.6	39.4	42.2

Survival Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1	1	1	1	1	1
0	Negative Control	1	1	1	1	1	1
0.024		1	1	1	1	1	1
0.0721		1	1	1	1	1	1
0.2111		1	1	1	1	1	1
0.6474		1	1	1	1	1	1
1.9699		1	1	0.8	1	1	1

Weight Detail

Group	Control Type	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Rep 6
0	Solvent Blank	1.17	1.15	1.25	1.08	1.28	1.29
0	Negative Control	1.24	1.34	1.23	1.05	1.09	1.12
0.024		1.42	1.19	1.24	1.07	1.11	1.57
0.0721		1.34	1.05	0.96	1.14	1.03	1.1
0.2111		1.02	0.9	0.97	0.92	1.07	0.94
0.6474		0.56	0.76	0.77	0.84	0.66	0.61
1.9699		0.23	0.37	0.48	0.56	0.45	0.41

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	21-3427-2443	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	
Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	6.54%	0.0721	0.2111	0.1234	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	12	NA	0	10	0.8355	Exact	Non-Significant Effect
		0.0721	22	NA	0	10	0.2814	Exact	Non-Significant Effect
		0.2111*	32	NA	1	10	0.0108	Exact	Significant Effect
		0.6474*	36	NA	0	10	0.0011	Exact	Significant Effect
		1.9699*	36	NA	0	10	0.0011	Exact	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1172.312	234.4624	5	20.7	<0.0001	Significant Effect
Error	340.0734	11.33578	30			
Total	1512.385		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	8.24	15.1	0.1436	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.912	0.917	0.0076	Non-normal Distribution

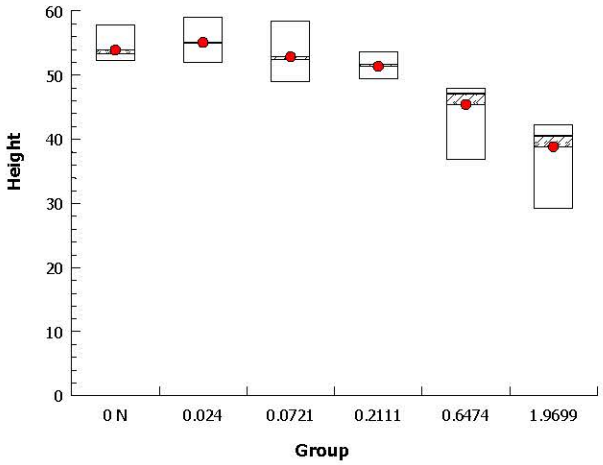
Height Summary

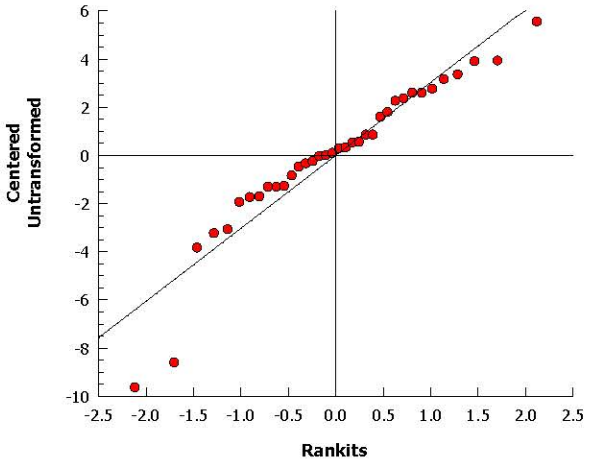
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	53.9	51.7	56.1	53.3	52.2	57.8	0.848	3.85%	0.0%
0.024		6	55.1	52.6	57.5	55	52	59	0.95	4.23%	-2.16%
0.0721		6	52.8	49.1	56.5	52.4	49	58.4	1.44	6.69%	1.98%
0.2111		6	51.3	49.6	53.1	51.6	49.4	53.6	0.671	3.2%	4.76%
0.6474		6	45.4	40.9	49.9	47.1	36.8	48	1.76	9.51%	15.8%
1.9699		6	38.8	33.6	44	40.5	29.2	42.2	2.02	12.7%	28.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	21-3427-2443	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	13-7276-4430	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:56	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	
Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.0721	0.2111	0.1234	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	12	NA		-2	0.8452	Exact	Non-Significant Effect
		0.0721	0.526	1.64	2	-2	0.2993	Asymp	Non-Significant Effect
		0.2111*	2.01	1.64	4	-2	0.0222	Asymp	Significant Effect
		0.6474*	4.06	1.64	5	-2	<0.0001	Asymp	Significant Effect
		1.9699*	5.43	1.64	5	-2	<0.0001	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	1172.312	234.4624	5	20.7	<0.0001	Significant Effect
Error	340.0734	11.33578	30			
Total	1512.385		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	8.24	15.1	0.1436	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.912	0.917	0.0076	Non-normal Distribution

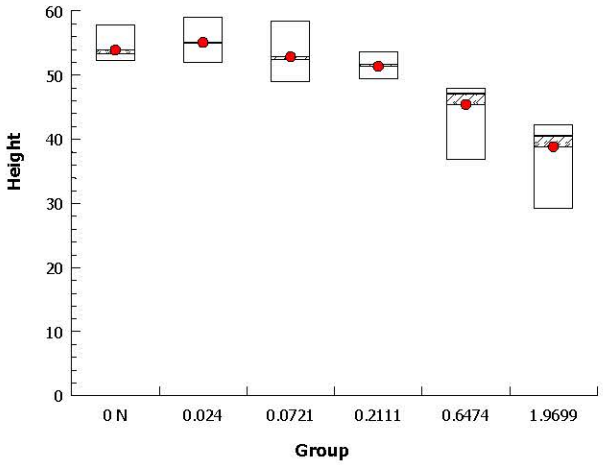
Height Summary

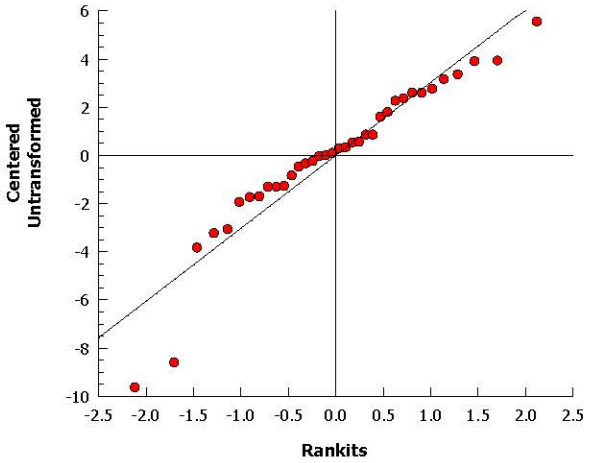
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	53.9	51.7	56.1	53.3	52.2	57.8	0.848	3.85%	0.0%
0.024		6	55.1	52.6	57.5	55	52	59	0.95	4.23%	-2.16%
0.0721		6	52.8	49.1	56.5	52.4	49	58.4	1.44	6.69%	1.98%
0.2111		6	51.3	49.6	53.1	51.6	49.4	53.6	0.671	3.2%	4.76%
0.6474		6	45.4	40.9	49.9	47.1	36.8	48	1.76	9.51%	15.8%
1.9699		6	38.8	33.6	44	40.5	29.2	42.2	2.02	12.7%	28.0%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	13-7276-4430	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:56	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-5959-4572	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes
Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	
Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	3.49%	1.9699	>1.9699	NA	

Mann-Whitney U Two-Sample Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.0721	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.2111	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		0.6474	18	NA	1	10	1.0000	Exact	Non-Significant Effect
		1.9699	21	NA	1	10	0.5000	Exact	Non-Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.005555556	0.001111111	5	1	0.4346	Non-Significant Effect
Error	0.03333334	0.001111111	30			
Total	0.03888889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	1	3.7	0.4346	Equal Variances
Variances	Levene Equality of Variance	6.25	3.7	0.0004	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.362	0.917	<0.0001	Non-normal Distribution

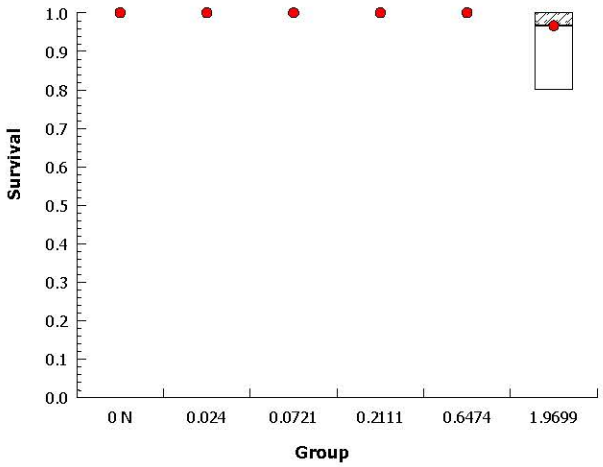
Survival Summary

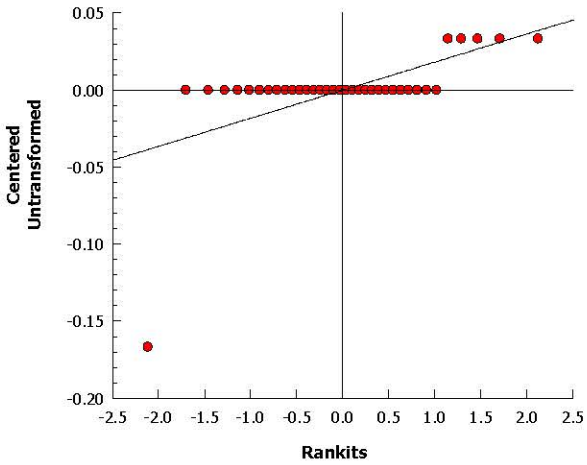
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	1	0	0.0%	0.0%
1.9699		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-5959-4572	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Nonparametric-Two Sample	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	18-8679-3747	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:56	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes
Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	
Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	0.6474	1.9699	1.129	

Jonckheere-Terpstra Step-Down Test

Control	vs	Group	Test Stat	Critical	Ties	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.0721	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.2111	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		0.6474	0	1.64	1	-2	1.0000	Asymp	Non-Significant Effect
		1.9699*	1.85	1.64	1	-2	0.0324	Asymp	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	0.005555556	0.001111111	5	1	0.4346	Non-Significant Effect
Error	0.03333334	0.001111111	30			
Total	0.03888889		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Mod Levene Equality of Variance	1	3.7	0.4346	Equal Variances
Variances	Levene Equality of Variance	6.25	3.7	0.0004	Unequal Variances
Distribution	Shapiro-Wilk W Normality	0.362	0.917	<0.0001	Non-normal Distribution

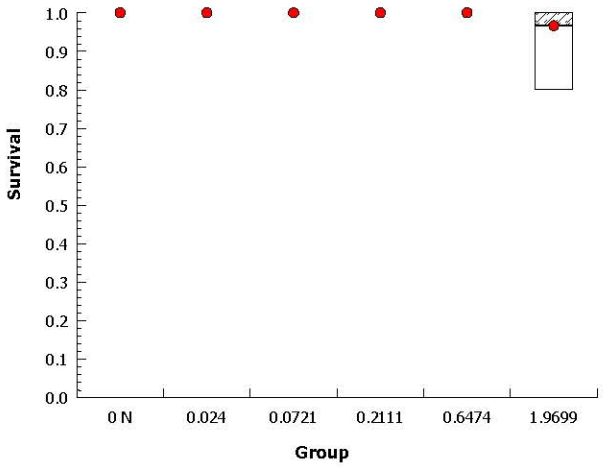
Survival Summary

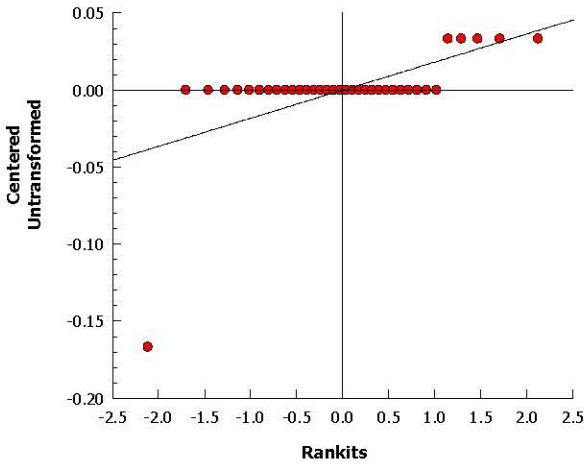
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1	1	1	1	1	1	0	0.0%	0.0%
0.024		6	1	1	1	1	1	1	0	0.0%	0.0%
0.0721		6	1	1	1	1	1	1	0	0.0%	0.0%
0.2111		6	1	1	1	1	1	1	0	0.0%	0.0%
0.6474		6	1	1	1	1	1	1	0	0.0%	0.0%
1.9699		6	0.967	0.881	1	1	0.8	1	0.0333	8.45%	3.33%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	18-8679-3747	**Endpoint:**	Survival	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:56	**Analysis:**	Nonparametric-Control vs Ord. Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	14-2369-4857	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes
Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	
Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	14.4%	0.0721	0.2111	0.1234	

Dunnett Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	-1.22	2.34	0.169	10	0.9914	CDF	Non-Significant Effect
		0.0721	1.03	2.34	0.169	10	0.4032	CDF	Non-Significant Effect
		0.2111*	2.87	2.34	0.169	10	0.0152	CDF	Significant Effect
		0.6474*	6.6	2.34	0.169	10	<0.0001	CDF	Significant Effect
		1.9699*	10.5	2.34	0.169	10	<0.0001	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	3.135392	0.6270784	5	39.8	<0.0001	Significant Effect
Error	0.4726834	0.01575611	30			
Total	3.608075		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.56	15.1	0.3512	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.972	0.917	0.4932	Normal Distribution

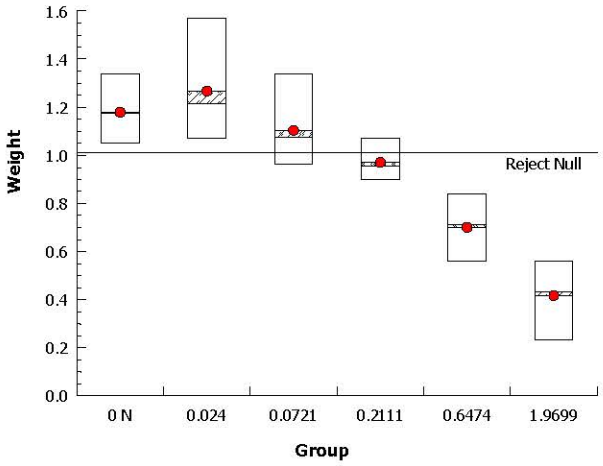
Weight Summary

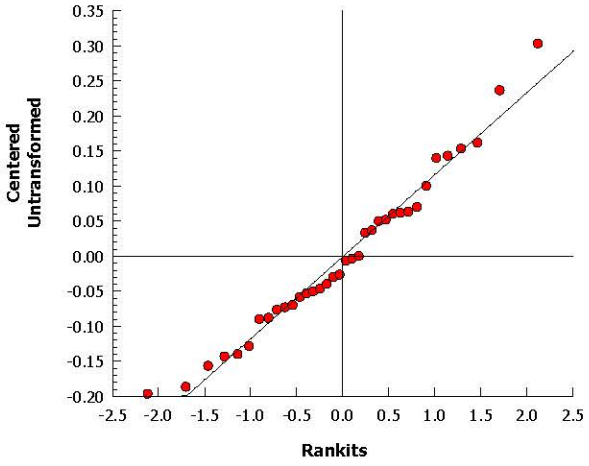
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1.18	1.06	1.29	1.17	1.05	1.34	0.0448	9.32%	0.0%
0.024		6	1.27	1.06	1.47	1.22	1.07	1.57	0.0786	15.2%	-7.5%
0.0721		6	1.1	0.966	1.24	1.08	0.96	1.34	0.0536	11.9%	6.36%
0.2111		6	0.97	0.902	1.04	0.955	0.9	1.07	0.0263	6.65%	17.7%
0.6474		6	0.7	0.588	0.812	0.71	0.56	0.84	0.0437	15.3%	40.6%
1.9699		6	0.417	0.299	0.534	0.43	0.23	0.56	0.0457	26.9%	64.6%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	14-2369-4857	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Parametric-Control vs Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-1082-1034	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:56	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes
Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	
Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Data Transform	Zeta	Alt Hyp	Trials	Seed	PMSD	NOEL	LOEL	TOEL	TU
Untransformed	NA	C > T	NA	NA	11.2%	0.0721	0.2111	0.1234	

Williams Multiple Comparison Test

Control	vs	Group	Test Stat	Critical	MSD	DF	P-Value	P-Type	Decision(α:5%)
Negative Control		0.024	-1.22	1.7	0.123	10	>0.05	CDF	Non-Significant Effect
		0.0721	1.03	1.78	0.129	10	>0.05	CDF	Non-Significant Effect
		0.2111*	2.87	1.8	0.131	10	<0.05	CDF	Significant Effect
		0.6474*	6.6	1.81	0.131	10	<0.05	CDF	Significant Effect
		1.9699*	10.5	1.82	0.132	10	<0.05	CDF	Significant Effect

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Between	3.135392	0.6270784	5	39.8	<0.0001	Significant Effect
Error	0.4726834	0.01575611	30			
Total	3.608075		35			

Distributional Tests

Attribute	Test	Test Stat	Critical	P-Value	Decision(α:1%)
Variances	Bartlett Equality of Variance	5.56	15.1	0.3512	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.972	0.917	0.4932	Normal Distribution

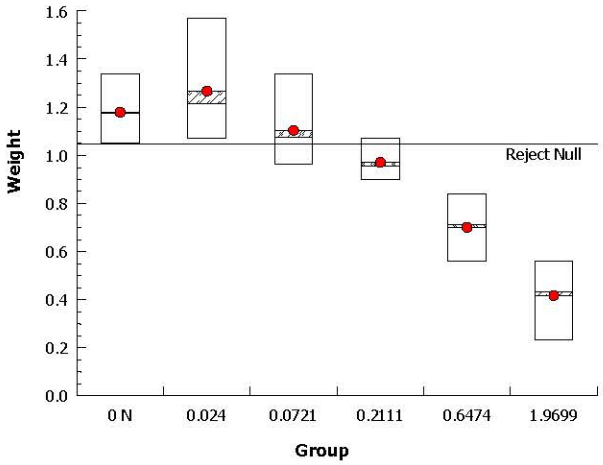
Weight Summary

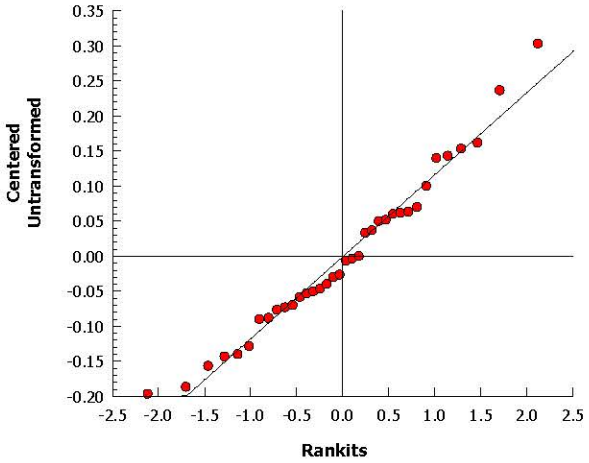
Group	Control Type	Count	Mean	95% LCL	95% UCL	Median	Min	Max	Std Err	CV%	%Effect
0	Negative Control	6	1.18	1.06	1.29	1.17	1.05	1.34	0.0448	9.32%	0.0%
0.024		6	1.27	1.06	1.47	1.22	1.07	1.57	0.0786	15.2%	-7.5%
0.0721		6	1.1	0.966	1.24	1.08	0.96	1.34	0.0536	11.9%	6.36%
0.2111		6	0.97	0.902	1.04	0.955	0.9	1.07	0.0263	6.65%	17.7%
0.6474		6	0.7	0.588	0.812	0.71	0.56	0.84	0.0437	15.3%	40.6%
1.9699		6	0.417	0.299	0.534	0.43	0.23	0.56	0.0457	26.9%	64.6%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	20-1082-1034	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:56	**Analysis:**	Parametric-Control vs Ord.Treatments	**Official Results:**	Yes

Graphics





OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	15-3168-1190	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	
Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
7	5190	-10400	-10400	0.7294	Yes	0.328	2.92	0.8052	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.14	0.0521	0.25
IC10	0.335	0.192	0.515
IC25	1.44	1.1	1.85
IC50	7.29	3.61	14.7

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	54.6	1.13	52.4	56.8	48.3	<0.0001	Significant Parameter
C	2.4	0.503	1.42	3.39	4.78	<0.0001	Significant Parameter
D	7.29	2.4	2.57	12	3.03	0.0047	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	22.73021	22.73021	1	96.3	<0.0001	Significant
Lack of Fit	0.247187	0.082396	3	0.328	0.8052	Non-Significant
Pure Error	7.538177	0.251273	30			
Residual	7.785363	0.235920	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	7.79	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	8.09	47.4	1.0000	Non-Significant Heterogenity
Variances	Mod Levene Equality of Variance	0.583	2.53	0.7130	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.885	0.94	0.0014	Non-normal Distribution
	Anderson-Darling A2 Normality	1.1	2.49	0.0070	Non-normal Distribution

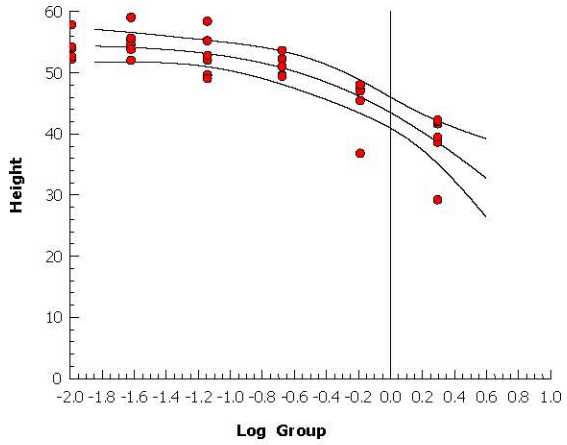
Height Summary

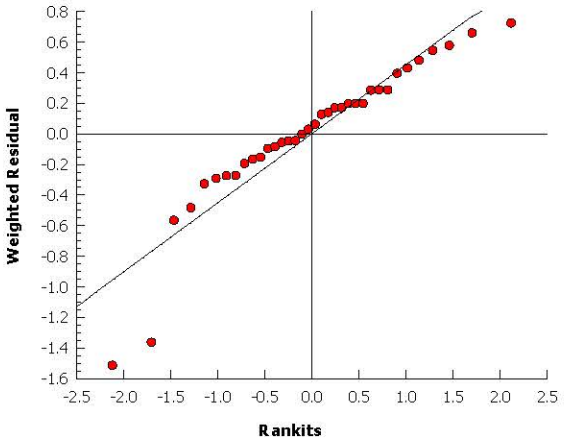
			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	53.9	52.2	57.8	0.848	2.08	3.85%	0.0%
0.024		6	55.1	52	59	0.95	2.33	4.23%	-2.16%
0.0721		6	52.8	49	58.4	1.44	3.53	6.69%	1.98%
0.2111		6	51.3	49.4	53.6	0.671	1.64	3.2%	4.76%
0.6474		6	45.4	36.8	48	1.76	4.32	9.51%	15.8%
1.9699		6	38.8	29.2	42.2	2.02	4.94	12.7%	28.0%

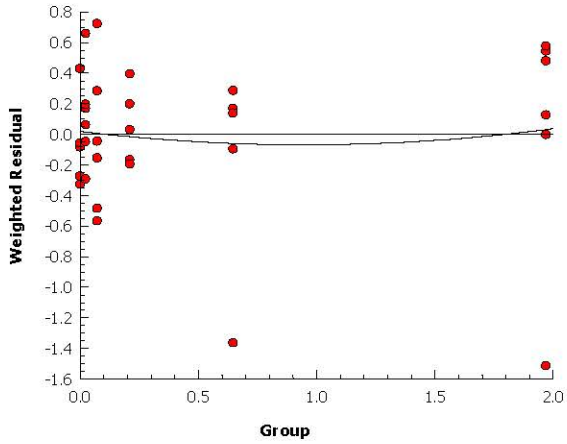
OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

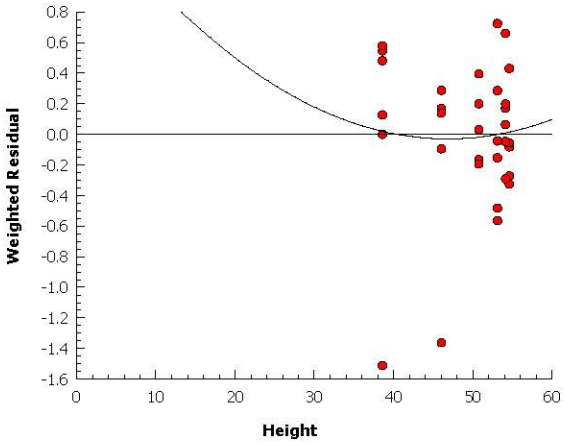
Analysis ID:	15-3168-1190	**Endpoint:**	Height	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]









OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) — **Wildlife International**

Analysis ID:	18-8985-4468	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes
Batch ID:	20-8736-6167	**Test Type:**	Vegetative Vigor Tier II	**Analyst:**	
Start Date:	02 Sep-11	**Protocol:**	OCSPP 850.4150 Plant Vegetative Vigor	**Diluent:**	
Ending Date:	30 Jan-13 16:39	**Species:**	Triticum aestivum	**Brine:**	
Duration:	516d 17h	**Source:**	Johnny's Selected Seeds, ME	**Age:**	
Sample ID:	09-3567-4458	**Code:**	48718015	**Client:**	CDMSmith
Sample Date:	02 Sep-11	**Material:**	Dicamba (#1918-00-9)	**Project:**	
Receive Date:	30 Jan-13 16:39	**Source:**	BASF Corporation		
Sample Age:	NA	**Station:**			

Non-Linear Regression Options

Model Function	X Transform	Y Transform	Weighting Function	PTBS Function
3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]	None	None	Poisson [W=1/Y]	Off [Y*=Y]

Regression Summary

Iters	Log LL	AICc	BIC	Adj R2	Optimize	F Stat	Critical	P-Value	Decision(α:5%)
7	-34.1	74.9	78.9	0.8418	Yes	0.824	2.92	0.4910	Non-Significant Lack of Fit

Point Estimates

Level		95% LCL	95% UCL
IC5	0.047	0.00467	0.089
IC10	0.0906	0.0459	0.143
IC25	0.272	0.191	0.372
IC50	0.922	0.756	1.12

Regression Parameters

Parameter	Estimate	Std Error	95% LCL	95% UCL	t Stat	P-Value	Decision(α:5%)
A	1.22	0.0464	1.13	1.31	26.4	<0.0001	Significant Parameter
C	1.81	0.246	1.33	2.29	7.37	<0.0001	Significant Parameter
D	0.922	0.134	0.66	1.18	6.89	<0.0001	Significant Parameter

ANOVA Table

Source	Sum Squares	Mean Square	DF	F Stat	P-Value	Decision(α:5%)
Model	3.268605	3.268605	1	188	<0.0001	Significant
Lack of Fit	0.043634	0.014545	3	0.824	0.4910	Non-Significant
Pure Error	0.529545	0.017652	30			
Residual	0.573179	0.017369	33			

Residual Analysis

Attribute	Method	Test Stat	Critical	P-Value	Decision(α:5%)
Goodness-of-Fit	Pearson Chi-Sq GOF	0.573	47.4	1.0000	Non-Significant Heterogenity
	Likelihood Ratio GOF	0.573	47.4	1.0000	Non-Significant Heterogenity
Variances	Bartlett Equality of Variance	5.48	11.1	0.3597	Equal Variances
	Mod Levene Equality of Variance	0.839	2.53	0.5330	Equal Variances
Distribution	Shapiro-Wilk W Normality	0.979	0.94	0.7164	Normal Distribution
	Anderson-Darling A2 Normality	0.337	2.49	0.5092	Normal Distribution

Weight Summary

			Calculated Variate						
Group	Control Type	Count	Mean	Min	Max	Std Err	Std Dev	CV%	%Effect
0	Negative Control	6	1.18	1.05	1.34	0.0448	0.11	9.32%	0.0%
0.024		6	1.27	1.07	1.57	0.0786	0.193	15.2%	-7.5%
0.0721		6	1.1	0.96	1.34	0.0536	0.131	11.9%	6.36%
0.2111		6	0.97	0.9	1.07	0.0263	0.0645	6.65%	17.7%
0.6474		6	0.7	0.56	0.84	0.0437	0.107	15.3%	40.6%
1.9699		6	0.417	0.23	0.56	0.0457	0.112	26.9%	64.6%

OCSPP 850.4150 Terrestrial Plant Tier II (Vegetative Vigor) **Wildlife International**

Analysis ID:	18-8985-4468	**Endpoint:**	Weight	**CETIS Version:**	CETISv1.8.7
Analyzed:	05 Feb-13 16:55	**Analysis:**	Nonlinear Regression	**Official Results:**	Yes

Graphics 3P Cumulative Log-Normal EV [Y=A*(1- Φ(log(X/D)/C))]